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in this issue . . .

- **Paving the Way.** With more and more companies using the "M.D.'s of industry"—consultants and outside specialists—to prevent or cure their organizational ills, it has become increasingly pressing for management to avoid the internal frictions and resistances that almost invariably develop when a consultant is called in. WILLIAM L. K. SCHWARTZ, who deals almost every day with consultants for Lockheed Aircraft Corporation, offers some morale- and money-saving advice in this month's lead article, *Using the Outside Expert: What to Do Till the Doctor Comes*.
- **The Payoff on New Products.** Although management is pretty much in the dark about the actual profit performance of a new product until well after it has been launched, there are methods of gauging profit potentials more exactly than many companies seem to realize. On page 9, JAMES W. RUSSELL tells how American Machine and Foundry investigates the cost and profit outlook at various stages of product development.
- **How to Boost Engineering Output.** A recent Harvard study—probably the most comprehensive ever conducted in its field—disclosed some rather appalling wastes and misuses of engineering talent throughout industry. GEORGE A. VON PETERFFY's article (page 15) recaps the findings and makes some vital recommendations for *Getting More Mileage from Your Engineering Staff*.
- **How Much for Research?** The big swing is toward more industrial research as a means of beating the recession and insuring future growth. Particularly timely, therefore, is EDWARD P. BURNHAM's article (page 20) on methods of budgeting and controlling today's all-important research expenditures.

—THE EDITORS

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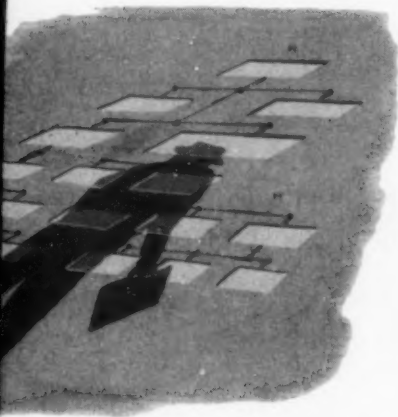
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Using the Outside Expert:

WHAT
TO DO
TILL
THE
DOCTOR
COMES



William L. K. Schwartz
Lockheed Aircraft Corporation

Consultants and outside specialists—often called the “M.D.’s of Industry”—can disrupt the organization they are called in to help unless management acts to avoid the potential danger spots.

Responsibility must be commensurate with authority . . . Lines of organization should never be by-passed . . . Good communication is good management . . . People naturally resist change.

These are among the organizational rules of conduct every executive knows and every progressive company tries to observe—and does observe, by and large, in its day-to-day working relationships within the company. But what happens when a “foreign body,” so to speak, enters the organization? What happens to communication, lines of authority, and all the rest, when an outsider and so-called expert arrives on the scene—a man whose very presence there betokens unsolved problems and possible disruption of the status quo?

This has become an important question as more and more companies, large and small, are turning to consultants for professional

help with their problems. About two years ago, it was estimated that there were some 1,700 consulting firms operating on a full-time basis—many of them with upwards of 100 top professional advisers on their staffs—with annual fees approximating \$200 million. And there is reason to believe that their numbers and importance have since grown. The range of their services has become extensive, cutting across production, finance, marketing, public relations, personnel, and every other major facet of business management. Their basic purpose? As one executive expressed it, "Such business 'doctors' are retained principally by companies in sound health. Unlike the Chinese, we would rather pay them to keep us well than to come in and bury the corpse."

These companies "in sound health" may call upon the services of a consulting firm for many reasons. Chief among these is the need for getting expert assistance and skills not immediately available within the organization and often required on a "one-shot" basis. An example might be the establishment of a totally new accounting system or a special study of consumer motivation. Almost every size and type of business organization uses the outside consultant in one way or another. For this reason, considerable attention has already been given to the means of evaluating a consultant and selecting the right one for the job.

SEVEN POTENTIAL DANGER SPOTS

Once this has been done, however, some new problems are immediately created. What steps can be taken so that the presence of this "foreign" element in the business body causes the least possible friction and disturbance among executives and employees? For this presence, it must be remembered, makes itself most clearly felt within the line operating organization—the very place where responsibility and authority problems are most acute. And the more employees the consultant deals with, the more potentially serious these problems are likely to become. Let's consider some of the possible danger spots.

1. Interference with company policy

The outside consultant, being unfamiliar with existing company policies, must of course be given every opportunity to bone

up on them. But often companies have certain mores and follow certain informal policies which, while not spelled out in black and white, have nevertheless become a tradition within the company. Ignorance or disregard of such informal practices may assume greater proportions than the violation of some obscure written policy. This is particularly true of matters affecting personnel, where employees have come to expect certain practices to be followed because "the company has always done it."

2. Undermining of executive authority

There is a tendency, when a consultant becomes deeply and closely involved in the activities of a company, for him to assume authority for certain actions on his own. A number of conditions can bring this about. The almost constant presence of the consultant may lead employees to regard him as sort of a "boss" and not only obey his direct instructions, but tend to look to him for direction. The frequent absence of the authorized and responsible executive may encourage the consultant to assume authority in order to "get things done." If the consultant detects weakness or lack of leadership, he may, almost unwittingly, move into the vacuum and assume authority that is not legitimately his. For the more technically competent he is, the more sensitive he will be to a poorly run organization. In such a situation, it takes rather considerable restraint to avoid interfering with established prerogatives.

3. Assumption of line responsibilities

A logical extension of the process of undermining the authority of an executive is a gradual (or perhaps sudden) assumption of line duties and authority. This is a particular danger where the program of the consultant is extensive and is scheduled to cover a long period of time. When there is conflict between a low-level company executive and a consultant, the attitude of higher management frequently seems to be, "Since we have invested in the consultant to such an extent, we had best back him to the limit." Thus, duties that properly lie with the executive are surrendered to the consultant.

An even greater opportunity for the assumption of authority by consultants lies in the occasional "lazy" executive who gladly sur-

renders a portion of his obligations to anyone who will and can carry them out. This is a particular danger where a department has been subject to difficulty of one sort or another over a long period of time; the consultant who is called in to observe and correct the situation frequently finds himself filling the gap left by the careless or inefficient executive.

4. Executive animosity toward the consultant

Poor handling in this volatile area could well negate the whole value of the consulting program. There are a host of possible causes of animosity toward a consultant, and one of the most prevalent is the fear that there is implied criticism of an executive, a supervisor, or an entire department because an "outsider" has been called in. Many people feel that such an action is a direct reflection on their efforts. It is sometimes feared, especially in periods of recession or retrenchment, that such an action precedes reductions in rank and pay.

Another cause of animosity is the feeling that the consultant does not fully understand the problems and difficulties of a particular situation. He is frequently considered an interloper who enters the department, talks to a few employees, and then, from his "objective and detached" position, makes recommendations that are impossible or, at best, impractical to expedite.

Animosity toward the consulting personnel may also result from an executive's fear of the dangers discussed before—that is, fear that the consultant will undermine or assume his authority. In cases where such usurpation has actually begun to take place, executives are quick to recognize it and to feel that their position is being arrogated.

Finally, there is the danger of too much zeal on the consultant's part. A "new broom" attitude that suggests "I am here to show you boys how things should be done" is the consultant's quickest and surest route to failure. A consultant's tasks call, above all, for diplomacy, and all suggestions must be made with tact.

5. Dissatisfaction of similarly qualified personnel

It is possible that there are men within the company who could do the job as effectively as the consultant—perhaps, because of

their familiarity with the company, even more effectively. To avoid ill feeling, management should ascertain who the qualified company personnel are before hiring the consultant. Are there reasons why they cannot do the job as well as a consultant? Are they too close to the job? Are there policy reasons why an objective observer would be more useful or diplomatic than a company one? If, after the situation has been thoroughly investigated, it is found that for some reason outside consultants are either necessary or desirable, the reasons should be explained—both to the personnel who will work with the consultant and to those with qualifications similar to his. People who see a highly paid consultant doing the same sort of work that they are doing, for no apparent reason, can easily lose confidence in themselves and in the leadership of the company.

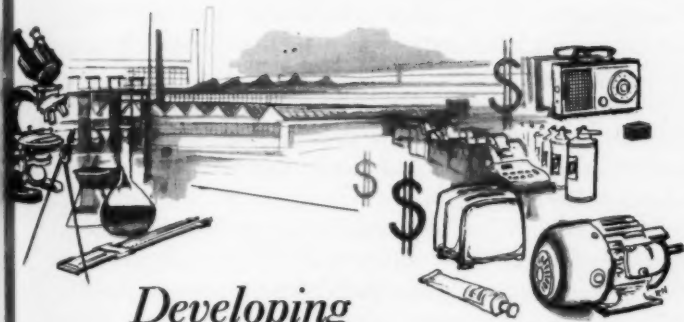
Another aspect of this particular problem that merits attention is the problem of recognition. When personnel of the company and consultants have worked hand-in-hand to attain some result, will the company employees gain recognition for their efforts, or will they be ignored when the credit is being given? This is a particular problem when a new idea has come from the consultant but the drudgery of implementation has fallen to the company's personnel.

6. Employee jealousy of highly paid consultants

The consultant is often a highly paid specialist, but his talents may not always be readily obvious to those with whom he works. When the pay of an individual consultant or the amount of money that the company is paying for the services of the consulting firm becomes known throughout the organization, the company must be especially careful to justify its position.

Special privileges enjoyed by the consultant may also be a cause of employee jealousy. A consultant's obligations to his own firm often make frequent absences from the company necessary. His hours of arrival or departure, the length of time he takes for lunch, and similar apparent privileges may have an adverse effect upon employee morale, particularly among the lowest echelons of supervision and among the operating employees. By regularizing

(Continued on page 65)



Developing

NEW PRODUCTS

for PROFIT

■ *James W. Russell*

*Assistant to the Director of Planning
American Machine & Foundry Company*

FEW NEW-PRODUCT PROGRAMS are started without the intention of making money, yet for each new product that is introduced, there are 500 or more that never even reach the market. And of those that do, surveys have shown that from 50 to more than 90 per cent are failures within the first two years. For whatever purpose they are initiated, then, it's clear that a tremendous proportion of new-product programs aren't adding a penny to the profits of the companies that invested time and money in them.

Your company is an unusual one if it has not faced one or more of the following problems:

- *The illegitimate engineering "baby."* The sales department does not want it and refuses to have anything to do with it.
- *The "Lazarus" idea.* This type of idea rises from the dead regularly every few years.
- *The "me-too" product.* This is a so-called "new" product that isn't new and isn't better than competition.

- *The "wandering ghost" idea.* This idea floats from department to department. No one knows just what to do with it, and yet it is never fully laid to rest or developed.
- *The ninety-eleven dollar product.* This product is worth \$100, but it cost so much to develop that it would have to sell for \$500 to make any money.
- *The false-start project.* This is most pitiful of all—the new product development that has to be killed for nontechnical reasons that could and should have been foreseen before development was started.

In view of the problems involved, it is easy to agree with the old production man's lament, "New products are a damn nuisance!" And yet these problems have to be faced. Most companies need new products if they are to grow, and in many others they are essential to survival.

It is not uncommon for a company to have half of its present sales in products that were not in use a decade ago. This trend is increasing, with whole industries anticipating future growth at vastly increased rates—and primarily in new products.

The odds are high against converting the average "hot idea" into a profitable new product, but the odds can be beaten if we can control the factors involved. Any company that makes a realistic appraisal of its new-product needs, and plans a program to fulfill those needs, will be able to develop successful products specifically designed to increase profits.

WHAT IS A NEW PRODUCT?

A product is *something* that is sold to *somebody*. If it isn't going to a market, it may be an idea, an invention, or a device, but it isn't a product yet—and it obviously is not a business.

A product is new if it expands beyond your present business. It can be an addition to your product line, sold through your present distribution channels. It can even be one of your present products introduced and sold to a different field. To qualify as new, a product need not be new to the customer. The criterion of newness is newness to your company.

In thinking of new products, it helps to keep in mind the types of newness. These degrees can be expressed in four categories:

1. *Product Improvement.* The automotive people carry this to a profitable extreme by selling a new set of improvements every year.

2. *Product Obsolescence.* Improvements alone appeal to a portion of the customers. The rest must be reached by obsoleting present products with new ones. One example of this is women's fashions: New styles may not be an improvement, but they certainly render the old models obsolete.

3. *Product-Line Expansion.* This is the broadening of present lines or the addition of allied lines. AMF, for example, started with a tricycle line and later expanded into the allied lines of sidewalk automobiles and baby strollers.

4. *Product Diversification.* This most far-reaching category of newness consists of developing a new product for a new field—one in which the company has no previous experience.

Every new-product endeavor, of whatever type of newness—product improvement, product obsolescence, product-line expansion or product diversification—should be a planned and coordinated program aimed at profits. With this in mind, how do we set the size and direction of a program that will be appropriate for our particular company?

DEFINING THE GOALS

The first necessity is a definition of the company's goals in such terms as size, areas of interest, and type of newness. We must distinguish between the *need* for new products to keep the company healthy and the *desire* for new products to force additional growth. Such a desire is legitimate, but it should be differentiated from need in spelling out company goals.

An analysis of the need or desire for new products, and the category of newness required, should start with an analysis of present products. These questions can serve as a basis for this analysis:

- How does my present product serve its user?
- What more could it do?
- What more would the user like it to do?
- What are its primary appeals?
- How can these appeals be increased?
- What are its present competitive advantages and disadvantages?

Analysis of this type should be directed toward a list of possible improvements in the product. Any important improvements that are feasible could lead to new models—thus obsoleting older models.

Approaching the next category of newness, product-line expansion, requires an additional analysis—the analysis of the organization. It becomes necessary to review such things as plant capacity, engineering capabilities, manufacturing capabilities, the distribution organization, and the breadth of distribution channels. We must also determine what other products could be produced or sold with the present organization—or with some degree of expansion of the present organization. An organization and distribution analysis such as this is aimed at determining what allied products could be handled with present capacities and capabilities, and what additional products could be handled with limited expansion of these capacities or capabilities.

Moving to the broadest category, product diversification, the analyses of product and organization should be supplemented with an over-all business analysis. This requires a major financial assessment of the company and its position in its industry, other industries, and the economy as a whole. It involves a review of such factors as where our industry is going, compared to the economy, and what outside fields may really be greener.

Internally, we must know management's goals, the size of program the company can afford, and any advantages the company has that would enable it to start a new business successfully. Such an analysis can be used to set the size and direction of a diversification program tailored to the particular company.

In essence, then, a new-product program should be started not by looking at possible new products but by looking at existing products—by determining where we stand and where we want to go. Knowing our advantages, limitations, and directions, we can set the goals of a new-product program that offers our company particular advantages and, consequently, has the seeds of success.

STAGES OF NEW-PRODUCT DEVELOPMENT

Once a program is planned, it must be organized and directed. Before it becomes a commercial reality, any new-product idea must go through six basic stages, which we at AMF call selection,

screening, business specification, development, testing, and commercialization.

In the *selection* stage, product ideas are sorted to see which ones could be of interest to the company. No detailed check of patents, markets, or technical feasibility need be made if the product does not fit the company's goals. The number of ideas eliminated at this point can vary tremendously, but too high a ratio of rejections at this stage should be suspect. A lack of imagination may be responsible if too many ideas are rejected because their possibilities are not evident at first glance. The goal at this stage is a preliminary review based primarily on broad criteria—company fit, apparent potential, etc.—to weed out the obvious misfits.

In the *screening* stage, selected ideas pertinent to the company and its goals are screened for those appearing to offer real promise. This stage may include an engineering review, preliminary market or patent studies, or other investigations necessary to check the idea for commercial values.

The relatively few ideas not found wanting in some major area during the screening stage are then approved for full investigation and *business specification*. Here the idea is really taken apart and put back together.

Engineering analysis and exploration studies are performed, a full patent study is made, and full-scale market study takes place. The results of these studies are then combined to spell out the details of the potential business. Risks are assessed, estimates are made, and forecasts of sales, profits, and investment are completed during this stage.

In short, the business goals and possibilities of the product idea are spelled out in sufficient detail to determine whether the commitment of funds for the program is warranted. This stage is of primary importance if products are to be developed for profit.

The fourth stage, *development*, consists of the actual engineering design and development. Although the primary responsibility in this stage rests in the engineering area, other areas of the company are involved. Marketing, for example, is further reviewing the market—not only for the unit as originally specified, but also for product specifications that engineering may suggest as the develop-

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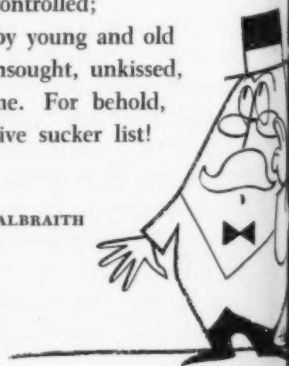
Ballad of the Elite

What balm is mine in the morning mail!
By a flattering advertiser told
That he got my name, after much travail,
From the costliest mailing roster sold.
No matter now how my fate is scrolled,
What storms, what tempests about me twist,
I'll laugh—ha! ha!—with a heart made bold:
I'm on an expensive sucker list!

Come tribulation, I shall not quail:
Though I'm getting plump, and I'm growing old;
Though I'm plagued with habits I can't curtail,
And my social lapses are manifold;
Though my friends despair, and I've oft been told
To visit an able analyst —
Let them fuss and fume, let them cluck and scold!
I'm on an expensive sucker list!

Though they find me guilty of tattle-tale
Gray matter; yea, though I be enrolled
In nobody's guest book because I fail
To keep my effluvia controlled;
Let it be remembered by young and old
As I wend my way, unsought, unknissed,
That somebody loves me. For behold,
I'm on an expensive sucker list!

—GEORGIE STARBUCK GALBRAITH





Getting
MORE MILEAGE
from your **ENGINEERING STAFF**

■ **George A. von Peterffy**
Assistant Director of Sales
Sulphur Export Corp.

THE SHORTAGE OF GOOD ENGINEERS is still with us—despite an oversupply in some regions owing to current business conditions—and industry is no less concerned with getting and keeping competent technical talent than it was a year or two ago. Moreover, faced with the profit squeeze resulting from rising costs and declining sales volume, management is now being challenged to get the most out of engineering and other “service department” dollars.

Like sales, production, and administrative manpower, engineering manpower has a productive role to play in business. In any well-managed company, manpower that has ceased to be productive has lost its *raison d’être* and is either redeployed or released.

To determine how effectively management is using engineering manpower, a research team at the Graduate School of Business Administration at Harvard spent some seven months last year studying 250 companies—a fairly good cross-section of American industry in terms of size, type of business, and geographical location.

This study, the results of which have been published in a special report,* makes it clear that much of the so-called shortage of engineers is a result of industry's misuse of the existing manpower pool.

Briefly, the report indicates that the full potential of the engineering staff is being lost in many companies. To be sure, an effort is being made in some of the larger, more mature and progressive companies that are heavily dependent on engineering to improve the utilization and motivation of their engineers. But in a surprisingly large number of companies, little or no conscious effort has been made to raise and maintain their productivity. Conditions and practices affecting engineers are perfectly adequate in some respects, but in others they are markedly imperfect—or even totally lacking. In effect, engineering manpower and the dollars behind that manpower are being wasted.

WHAT THE SURVEY SHOWED

To begin with, the organization of the engineering department in many companies is extremely haphazard. In 10 to 11 per cent of the companies visited, management had apparently given little or no thought to the effects on their personnel of group size or of the "project" or "systems" approaches. Physical working conditions were often barely adequate or substandard, and in terms of noise or distraction levels, fully 81 per cent of the companies examined provided engineers with work space in which concentration and mental efficiency were difficult.

In addition, engineers in some companies spent as much as one-third to one-half of their time performing senseless or elementary work that could and should have been handled by office boys, secretaries, and technicians. At the other extreme, seven of the 250 companies provided such an army of supporting personnel to relieve their engineers of extraneous work that many of the men complained that they were losing touch with their projects. And in almost every company, unnecessary or inappropriate types of engineers and technicians were hired from time to time, simply because management had no real grasp of their technical manpower requirements and inadequate screening or control procedures.

* *Engineering Manpower*, by George A. von Peterffy, et al. Engineering Management Reports, Cambridge, Mass., 1957.

Training is another area in which money, time, and manpower are being wasted. In about 17 per cent of the cases examined, trainees were carelessly selected, or inappropriate programs were hastily devised and only infrequently reviewed or overhauled. Curiously enough, in companies where training programs were least effective, the engineering patent and compensation policies were most often set up and administered solely by the personnel administration people. Invariably, personnel policies affecting regular production personnel and engineers were undifferentiated in such cases, and management had little or no awareness of the poor morale effect that such undifferentiated policies can have on engineers—who, rightly or wrongly, like to think of themselves as professionals above and apart from “mere employees.”

COMPENSATION, PLANNING, AND COORDINATION

Generally speaking, this study confirmed the recently published findings of other researchers in the area of engineering compensation. Although limitations of time and money precluded an exhaustive and authoritative statistical treatment of this question, it was nevertheless clear that (1) management finds the evaluation of engineering performance extremely difficult; (2) longevity or seniority are often seized upon as a convenient crutch for setting engineering salaries; and (3) management is oblivious to the dangerous ramifications that such a policy entails. Policies that tend to deprecate qualitative or technical contributions can have pernicious indirect effects, although they seem to have no immediate direct effect on engineering productivity, but few executives seem to appreciate this danger.

Management also tends to lack appreciation in still another and more important area: planning and coordination. These important functions are frequently left entirely in the hands of the chief engineering officer or supervisor. In 156 of the 250 companies investigated, top management had no idea of the type of work being done by their engineering staffs, nor how or by what individuals technical assignments were being carried out. Although members of higher management knew many of the sales, production, and administrative personnel—and had a working knowledge, or at very least some idea of their methods, problems, and abilities—they in-

variably knew comparatively few of the top engineering people and virtually nothing about their peculiar problems and abilities. All too often, the engineers were looked upon as strange birds singing hopelessly unintelligible tunes, whose planning, direction, coordination, and control were best left to the chief engineer and his associates.

The quality of these functions, therefore, was never any better than the men who were responsible for their discharge. And although these men generally did a perfectly adequate job in a technical sense, administrative procedures in their engineering departments were frequently confused and jumbled. The supervisors in charge were invariably too busy "getting out the work" to bother with improvements in administrative techniques, or else they were perfectly satisfied with the adequacy of procedures that were the object of undisguised scorn or amusement on the part of their colleagues in other areas of the organization.

Most noticeable, however, was the dearth of capable and effective leadership, particularly at the lower levels of engineering staffs. Apparently, "getting out the work" occupied so much time and attention in fully 62 per cent of the engineering departments covered that no attention could be given to the development and training of some of the younger men in the techniques of effective direction, control, and human relations.

WHAT CAN MANAGEMENT DO?

Is it possible that American management, which has scored such notable triumphs in production, marketing, finance, and other areas, can be indifferent to this problem? Of course, the answer is no. There are few companies in which management is unaware of the need for improvements in this area, but the problem seems to be what to do and how to go about it. Nontechnically trained executives more often than not seem to be out of touch with the requirements and problems of their engineering staffs. And, to compound the problem, technically trained executives and managers in such companies are usually unwilling to believe or to admit that substantial improvements in the level of engineering productivity can be made. This may be due to understandable, but not condonable, professional pride. More probably it is due to the fact that technically trained executives are often the products of the systems over

which they now preside, and they have seldom been exposed to administrative training.

It may be that some managements have lost touch with the engineer as our industrial organizations have grown in size and intricacy. It may be that the rapid advance of technology has made engineering far too awesome and complex for the average layman to understand. It may be that production and sales problems have required most of the attention in past two decades. But whatever the reasons, it seems clear that before anything can be done to improve engineering manpower's production, top-level management must obtain a thorough understanding of their engineers and the work they are expected to perform. They must know and learn to appreciate how engineers think and work, what motivates and frustrates them, what conditions and equipment they need, and how they should be handled.

The selection of areas for making specific changes to boost the level and quality of engineering productivity will, of course, vary from case to case and will depend on the circumstances involved, but some general guides, based on the findings of the study, can be suggested as a basis for management action.

GUIDES FOR ACTION

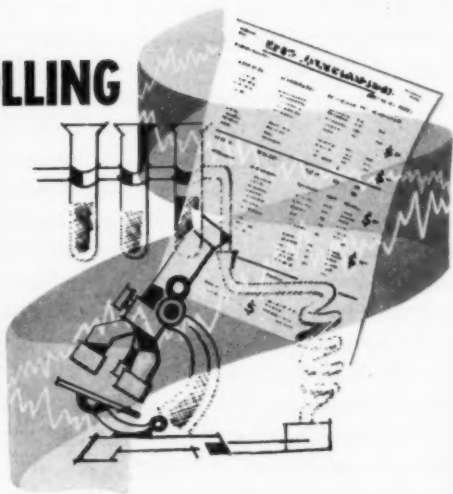
Probably the most productive way to get more mileage from an engineering staff is to find and train better leaders for engineers—not simply to find more engineers or to coddle those one has. Beyond this, effective planning is undoubtedly the second most critical determinant of engineering productivity. Lacking either of these factors, it is impossible to impart a vitally necessary sense of drive and urgency to the engineering staff.

Of course, there are other factors that bear upon an engineering staff's productivity, but because they reflect effective planning and leadership to a considerable degree, they do not generally hold the same potential for improving engineering output.

The nature of the organization, the physical working conditions and equipment provided, and the quality and availability of supporting personnel directly influence the engineers' day-to-day operational environment. Because mental and physical efficiency are

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CONTROLLING THE COSTS OF RESEARCH



■ **Edward P. Burnham**
Manager, Laboratory Services
Monsanto Chemical Company, Plastics Division

EVERY YEAR, American business spends an increasingly large portion of its operating dollars on research. Because of the vast sums involved, it is important for management to develop accurate methods of controlling research expenditures—both to prevent unprofitable or unintended spending and to insure that appropriated funds are used in the most effective manner.

Broad control is exercised by regulating the funds available to research, but adequate cost data is necessary to provide both research management and top management with a basis for establishing the final budget. Accurate records help the research director estimate how much money his department will require and, in many cases, indicate where expenses can be reduced. Using this estimate and periodic reports as guides, top management can segregate research costs from other company costs and realistically forecast research spending.

Depending mainly on a company's size and type of operation, there are many ways of defining research. Perhaps the best approach to a definition is to outline some of the functions or activities of research:

- Searching for new products and processes;
- Improving existing products and processes;
- Developing new uses for known products;
- Solving technical problems in the manufacture and maintenance of existing products; and
- Expanding general knowledge in scientific fields.

One company may use broad categories, while another may be more specific. For example, one company may list its research activities as follows:

1. Fundamental research
2. Development of new products and processes
3. Improvement of present products and processes

A second company may list them in this manner:

1. Research on present products
2. Research on new products
3. Application research
4. Pilot plant research
5. Sales service
6. Production service
7. Fundamental research

The type of classification a company uses generally indicates the relative emphasis it places on various research activities and is a guide to operation and control.

THE PURPOSE OF RESEARCH

Ralph H. Manley has defined the purpose of research in terms of a responsibility of management "to provide the technical leadership necessary in order for the company to earn a satisfactory return on its invested capital, both this year and especially down through the years to come."

Restated as objectives, this responsibility becomes:

1. To maintain the company's prestige and profits by keeping existing products competitive in quality and price.
2. To improve the company's competitive position and increase

profits by developing new products that replace or supplement existing products, and by improving present products to a point where they have greater acceptability in the market.

3. To explore possibilities for expansion into related or unrelated fields that offer opportunity for substantial profits.

If we accept these as the objectives of research, then we have a charter for the establishment of budgets and cost reports, which in turn will provide data for control of research by management.

DEFINING RESEARCH COSTS

Costs must be measured on a consistent and well-defined basis before they can provide meaningful data for management decisions. This requires a clear understanding of what is to be included in—and excluded from—research costs.

Fundamental research should be included, since it covers work leading to new technology, even though it has no particular connection with present products. In addition, projects leading to entirely new products or processes should be included when they are within the broad scope of the company's present field of activity. And finally, projects should be included when, through application of new technology, they lead to improvement of present products and processes, or when they are designed to protect current investment and market position.

At the same time, some items seem to find their way into the research budget even though they do not belong there. Examples of this kind of cost include technical advice or assistance to help the production department out of difficulty or to carry on its normal operations; trouble-shooting to correct production errors that have reduced normal standards of materials; cost-reduction activities for the production department; technical advice or service to the marketing department on specific customer problems; assistance to the marketing department in the extension of going products into new application areas; and preparation of samples, at marketing department request, for specific customer requirements.

Since the research department must account for and justify its expenditures in terms of results, it should only be charged with the costs of research activities. All work of a service nature should be charged to the department for which it is performed, and the

accounting system should include a method for separating these costs from research costs. The extent of the research department's service effort should be measured by the availability of research personnel to perform these services and still fulfill the research mission.

We must also decide when research responsibility—and therefore research cost—ends. Depending on established policies, any one of the following guides can be used:

- When production accepts the process.
- When commercial sale begins.
- When the product is made in interim facilities.
- When a pilot plant produces small quantities for sale.
- When the product is turned over to the engineering department for commercial design.
- When production drawings, a working model, and standard manufacturing practices are complete.
- When the product has been manufactured long enough to show that it can be produced in quantity.
- When the product is transferred to a manufacturing company or product division.

Nearly all research departments provide technical service for other departments, and some companies assign full responsibility for solving all problems of a technical nature to the research department. However, the majority of companies provide technical personnel in other departments—production, sales, engineering, etc.—to allow research personnel to concentrate their efforts on new products and processes.

When charges are made to other departments, they are accumulated under appropriate project numbers, and the total cost is transferred at periodic intervals from research accounts to the department requesting the service. The practice of making interdepartmental charges reflects their costs accurately and does not burden research with what properly should be manufacturing or sales expense. Furthermore, this practice requires that other departments justify their requests and discourages undue demands on the research department.

Interdepartmental charges are not made when it is established that the work is primarily research, when other departments might

otherwise be duplicating existing projects, or when the company decides to minimize the expense of accounting for internal transactions.

DEVELOPING COST AND BUDGET REPORTS

Some large research departments have separated technical activities from administrative functions such as budgeting, accounting, and servicing. This permits research management and technical personnel to concentrate on research projects. When this approach is taken, the business administrator is usually a member of the research staff and reports directly to the director of research. He prepares budgets, assists in maintaining and improving the plan of control under the budgetary program, and guides or coordinates accounting reports.

When research departments are small, budgeting and accounting are normally performed by the accounting department. Regardless of organization, however, the director of research is responsible for financial plans embodied in the research budget.

The plan for classifying costs should meet management requirements at all levels, providing the necessary data from current accounting records. The same classifications will, of course, be used for budgeting as well as for recording current costs.

What does management want to know? If we consider managements requirements as questions, then our classifications system can be designed to answer them.

What was the total spent for research?

This total can be obtained by having a single account to which all research expenses are charged. Since both the research director and top management are concerned with this type of data, it might be desirable to separate the expenses of different laboratories. The basic control account can remain the same, with the use of additional code numbers to identify each laboratory.

What was the cost of each individual project?

When it has been decided to activate a particular research project, a project number is assigned and all expenses are charged to it.

(Continued on page 80)

1958: The Second Half Looks Better



Condensed from Business Week

AS 1958 TURNS the halfway mark, the business contraction has reached what looks like bottom. The question now is: When can business expect to start climbing again?

A nationwide *Business Week* survey shows that U.S. businessmen are virtually unanimous in thinking the recovery will be relatively slow to come. Few companies expect a real rise until autumn. Some don't look for the upturn until the middle of next year, or even later. But a few, with new orders starting to arrive in greater volume, think the upturn is already here and will continue vigorously.

Various developments are in the cards that will make businessmen feel better in the second half of 1958:

Spending money in the hands of consumers is rising. What economists call disposable personal income fell \$3.2 billion, at annual rates,

from the third quarter of 1957 to the first quarter of 1958, but it rose slightly in the second quarter and is predicted to rise, in annual rates, about \$3 billion in the third quarter. This will push after-tax personal income in the third quarter to an annual rate of nearly \$305 billion—the highest in U.S. history. Even after adjustment for higher prices, it's only 1 per cent below the third quarter of last year—the peak rate for a quarter.

Since consumer spending depends most directly on personal income after taxes, this income trend almost automatically insures that consumption is going to hold up well in the months ahead.

Continued strength of consumption will help slow the breakneck pace of inventory liquidation that has marked the first half-year. Business liquidated inventories at a \$9-billion rate in the first quarter and roughly the same in

Business Week (June 28, 1958), © 1958 by McGraw-Hill Publishing Co., Inc.

the second. From now on, it will be reducing inventories more gradually or even, by year-end, holding them steady. This reversal of the inventory trend will mean a big second-half boost to production.

Government spending will be on the rise, apart from retroactive pay increases to federal employees. This year, federal, state, and local spending will be up about \$5 billion, and more of the increase will come in the second half than in the first.

The increase in the money supply and the cut in interest rates will continue to stimulate borrowing and spending. The shift in monetary policy has already had a marked effect on homebuilding.

Opposing these factors for recovery are other factors that make up an undeniable inertia or resistance. These must be overcome if the year is to live up to its promise as a real economic turning-point.

Part of the resistance is rooted in psychology—a puritanical feeling among both businessmen and their customers that they got their comeuppance because they had been spending too wildly, expanding too much, indulging themselves too readily. Consumers complained, too, that prices were outrageously high for the quality of the goods being offered—and they could afford to balk when they had already accumulated so many durable items during the boom.

But the two principal curbs on full recovery aren't psychological quirks; they are barriers that are only too real. One is excess capacity. During the 1955-57 boom, business made expansion plans that far exceeded the market growth that has material-

ized. As the surplus of capacity became evident, businessmen compensated in their spending plans.

Now that expectations of a sales increase in the next few years have been trimmed back, most industries are convinced that they won't have to spend money on new plant and equipment at anything like the recent record pace—at least for a few years. In the fourth quarter this year, capital spending will be down to an annual rate of \$29 billion—nearly 20 per cent below last year's \$37 billion.

The second curb on recovery is the persistence of unemployment at levels not reached in the previous postwar recessions. More than 7 per cent of the labor force is jobless already, and the labor force is still growing. Another factor keeping unemployment higher than the country is used to may be a sharper rise in labor productivity, as employers struggle to cut costs and increase efficiency and workers struggle to hold the jobs they have come to appreciate more fully during the slump.

You get a sense of the much more sober national mood when you talk to businessmen around the country. And their view of the economic future has a powerful bearing on plans. The sober conservatism of businessmen around the country is typified by one observer's mixed metaphor that "the roof isn't going to fall in, but we're not out of the woods by a good deal."

With few exceptions, businessmen look for an upturn by the end of the third quarter and for a fourth quarter that will be the best slice of the year. ♦

Both advertisers and their agencies have grievances that are causing strained relations and many severed associations . . .

What's Behind the Agency-Client Switches?

THE GAME of musical chairs being played on Madison Avenue is hitting a hectic pace these days: in the first three months of 1958 no less than 52 major accounts changed agencies. What are some of the problems in agency-client relations that are creating this lack of stability?

A survey of some of the nation's top advertising managers and agency executives recently conducted by *Tide* has pinpointed many of the specific grievances on both sides.

Lack of communication between client and agency is the complaint of a great many respondents. One agency vice president said that "often neither side has the faintest idea of what the other is after," and the ad manager of a major pen company wanted "better spelling-out of the relationship, to define the obligations of each member of the partnership."

One ad manager blames the communication trouble on the fact that "in many companies advertising authority is spread out all over the lot instead of being kept within the advertising department." The president of an ad agency pinned lack of communication on the client, "because we constantly have to guess what he is thinking." Yet another agency president felt agencies themselves make

Condensed from Tide

the biggest mistake by talking in terms that the client doesn't understand. He suggested that "agencies use the language of top management when talking to top management. Such terms as Starch, Nielsen and cost-per-thousand are strictly agency talk, and management won't listen until we translate these terms into what they want to hear—advertising per dollar of net worth, the wage dollar, or gross profit per sale."

Finances is another big stumbling block in the path of good client-agency relations. The ad agencies accused clients of a lack of understanding in money matters. One agency executive criticized "the too-common tendency on the part of clients to arbitrarily cut budgets when we have already spent considerable time on their campaigns."

The board chairman of a top-ten agency called for "a better understanding by the client of the agency's cost of doing business, especially with all the marketing, research, package design, and other services." One agency vice president claimed that "clients often expect too much from their advertising in relation to the size of their budget." This, he added,

Tide (May 23, 1958), © 1958 by Executive Publications, Inc.

"often makes advertising the whipping boy for the clients' other problems."

Advertisers, on the other hand, maintained that agencies don't cooperate in financial situations. The ad director of a large company doesn't believe "that agencies make an effort to keep production cost down."

One company ad manager, however, sided with the agencies on the financial question. He said that too many clients look upon advertising strictly "as an expense of operating the business." Agencies, he believes, should make "a serious attempt to convince client management that their advertising expenditures are sound investments that can pay dividends when properly applied."

The 15 per cent compensation system came under fire from both advertisers and agency men. The ad manager of a major steel corporation complained that "compensation based on commissionable media leads agencies to pressure clients for more costly media, while they neglect such vital services as direct mail promotion, dealer support, sales help material, etc." An agency vice president didn't like the present commission system any better: "The 15 per cent base of compensation should be thrown out and replaced by a professional fee contract a la management consultants."

Many advertisers expressed dissatisfaction with the service they get from their agencies. For one thing, many clients were appalled by the agencies' lack of knowledge and information. "They know nothing about market conditions," claimed one chemical company ad manager, "and,

furthermore, they lack seriousness about 'business' as business and have neither knowledge nor appreciation of the problems and needs of the advertiser."

Advertisers were also displeased with the agencies' initiative and output. The ad manager of a large tool company said that "everything at the agency seems to be a crash job because it's not started until too late." It was his opinion that "advertising managers are forced to literally 'ride herd' on the agency to get jobs out on time."

The advertising director of a large stove company complained that "agencies will not initiate ideas. Instead, they wait for the client to ask for the work before tackling a project." Said another ad manager: "Agencies expend too much effort fighting ads produced by other agencies—which they consider their competition—rather than working on advertising and marketing strategy to fight the client's competitors."

Almost half of the ad managers in the survey felt that agencies tend to become lax in the servicing of accounts after a while. The public relations director of one of the biggest pharmaceutical companies said his experience indicates that the agencies "use the big guns to get the account and then permit them to vanish into thin air. They reappear only when the account is in jeopardy."

Strong disagreement came from an agency vice president: "Let ourselves get lax? Never! We may disagree with our clients, but we don't think they're stupid!"

Agency executives were just as vehement in their criticism of the

advertisers. Several of them heaped most of their abuse specifically on the ad manager. The vice president of one agency charged that "ad managers hinder the consideration of forward-thinking ideas." He advised that clients "eliminate or elevate ad managers" to get better service. Another agency vice president said that "the functions of the ad manager must be upgraded and he must be pushed into being more aggressive."

A significant number of agency executives roundly condemned advertisers for firing agencies "without just cause" and "without sufficient warning." The vice president of one agency called for "the establishment of long-term contracts—at least a minimum of one year—to eliminate the fear of cancelation." Another agency executive felt "it's an advertiser's prerogative to change his

mind, but the way some of them go about it is downright unethical."

The ex-president of two large agencies agree that sudden account switches jeopardize good client-agency relations. But he pinned much of the blame for this on agency people themselves.

"The flight of account executives—taking prize accounts with them—is a major problem," he said. "It connotes a situation of bad management or weak integration of key executives into the basic organization."

Advertisers had some harsh words of their own for agencies who instigate account switches. The president of an electronics company was "disappointed over the willingness of agencies to seduce another agency's clients." He said that "we get a letter every two weeks from a competitor of our agency." ♦

Checking Up on the Forecasters

EVERYWHERE YOU TURN these days you encounter business forecasts—some valuable, others worthless or actually misleading. Writing in *Purchasing* magazine, Robinson Newcomb suggests these four rules of thumb for evaluating a forecast:

1. Check previous forecasts from the same source. Forecasts are not always as well prepared as they are well publicized.
2. Check the basis of the forecaster's past predictions. A forecast that said the price of orange juice would rise in February because we would be coming out of the recession and consumer income would be rising might have been an accurate forecast of the price of orange juice, but it would have been an inaccurate forecast of cause and effect. The validity of forecasts depends, not on whether they are right, but on whether they are right *for the right reasons*.
3. Determine whether the forecaster has an axe to grind or a discernible bias that may color his forecasts or his reasoning.
4. Be wary of forecasts that predict a continuation of current trends. This is the safest forecast to make, for momentum will carry almost any situation forward for some time. For making longer-range plans, you want to know when a change will come.



Businessmen Get Practical About Politics

Condensed from Nation's Business

ALTHOUGH businessmen have traditionally taken part in nonpartisan get-out-the-vote campaigns in election years, this year will find more of them getting right into the thick of practical politics by running for office themselves, helping to select qualified candidates, and campaigning for the candidates and issues they favor.

This new trend of more business participation in partisan politics is the result of an increasing realization by many businessmen that letter writing, resolutions, educational campaigns, and publicity do little good if the majority of those in Congress are elected largely through the support of groups representing opposite interests.

To remedy this, business is undertaking two kinds of political education programs: external and internal.

External activities frequently take the form of community-wide political education programs sponsored by companies or business organizations. For example, the Effective Citizens Organization conducts practical politics

workshops for businessmen on college campuses. Colleges are also considering adult education classes in practical politics at the suggestion of businessmen.

Internal programs are a natural follow-up of the external training. Sometimes the main purpose of the outside seminars is to train leaders to develop political activities inside the company.

General Electric Company, besides holding political education seminars in various plants, has recently established a government relations service to help its management personnel develop a better understanding of the interrelationship between government and business.

In Syracuse, N. Y., the Manufacturers Association is sponsoring a community-wide program which combines external political seminars with education in the plant. A five-phase plan of action was set up and is now being carried out:

1. The Association published a manual of political and government

Nation's Business (July, 1958), © 1958 by Nation's Business—the Chamber of Commerce of the United States.

information in readable digest form, called *A Political Primer for Management*. The primer includes information on local, state, and federal governments, political party structures, the operation of political machinery, how laws are passed, ways to influence legislation, practical tips on such things as making speeches and writing letters to legislators, and other useful information.

Also included is a message from Vice President Richard M. Nixon, in which he advises the businessman to choose the party that comes closest to his political beliefs, then go to work in that party and make his voice heard.

"You achieve nothing by standing on the sidelines wringing your hands and wondering why someone doesn't do something about a problem that directly affects you," he says.

2. The practical politics plan was explained and sold at a dinner attended by the chief executive officers of firms employing 80 per cent of the city's industrial workers. Each company head was asked to send one upper-middle management employee to a two-day seminar three weeks later.

3. Leaders of both Republican and Democratic parties cooperated in the two-day seminar. Some 45 participants heard talks by, and participated in discussions with, political and business leaders.

David H. Jaquith, president of Vega Industries, Inc., and chairman of the Association's governmental affairs committee, explained what the Association hoped to accomplish through the practical politics program.

"Our objective," he said, "is to

develop a group of management people like yourselves who can be the nucleus of a growing and continuing program. The goal is to bring the business point of view into political discussions at all levels—most particularly at the grassroots levels."

4. Fourteen 11-week seminars were conducted for employees of 22 companies of all sizes. About 300 employees participated, from production-line supervisor up to vice president.

The in-plant seminars emphasized individual action in politics. Assignments for the participants included: (1) writing a personal letter to a Congressman; (2) visiting a local council meeting; (3) contacting a state legislator; (4) visiting an election district committeeman in the neighborhood; (5) and breaking down and appraising local tax rates.

5. This phase, now in progress, consists of follow-up activity to measure the effectiveness of the seminars. Suggestions from participants for increasing political activity by individuals and for company assistance are sent to top management for consideration.

J. J. Wuerthner, manager of community activities at General Electric's Electronics Park, who is chairman of the Association's practical politics subcommittee, believes that a practical politics program based on the Syracuse plan can be successfully carried out in any community.

"This pattern of political activity requires only a small nucleus of interested management people, plus a real determination to start action where political decisions start, where political candidates are trained,

groomed and selected—the political committee level in your neighborhood,” he says.

“Nobody’s going to do it for you. You’ve got to think in terms of do-it-yourself. Develop a workable plan, enlist members of the business community, sell top management, get your area political leaders into the act, and emphasize the local impact of politics and government.

“Then systematically train business leaders in the practical political fields where fear and apathy have prevented them from entering before.

“It’s a formula that’s inexpensive, and can be used by a single company or a group of companies anywhere.”

General Electric has shown what a company can do internally to stimulate political activity among its employees. It has held political action seminars, its officers speak out frankly on the importance of political interest on the part of the businessmen, and participation in community affairs is considered to be among the responsibilities of G. E. managers.

In Syracuse several months ago, G. E. management sponsored a public affairs recognition luncheon to honor 15 employees who were either elected

or ran for public office last year. The G. E. Lamp Division surveyed its management employees after holding political seminars and discovered 75 of them were holding public office or were otherwise active in politics.

G. E.’s newly established Government Relations Service is basically a research and planning group designed to help the company and its personnel get a working knowledge of the interaction of government and business so they can fulfill their responsibilities in public affairs.

Jack S. Parker, vice president in charge of Public and Employee Relations Services, says the new group will be responsible for identifying general governmental trends and developing background information on public issues that affect business.

“The new unit will explore where and how the company can make greater contributions to the effective working of the democratic governmental process,” according to Parker. “It will also encourage public awareness of the ways in which sound government actions can develop a social and economic climate that permits business to be of maximum service to the American people.” ♦

THE WALL STREET INVESTOR these days is, typically, a middle-aged man from a big eastern city who earns from \$10,000 to \$25,000 a year. He accounted for 38.4 of the trading on the New York Stock Exchange on two typical trading days last fall. The “little investor” (\$5,000 and under) was shrinking in importance; he accounted for 4 per cent of the transactions, as against 9 per cent a year earlier. A fourth of the trading was taken up by institutions, while floor specialists and other exchange members accounted for nearly another quarter. About 82 per cent of the trading was strictly for cash, compared with 78 per cent in the previous survey.

—*Newsweek* 3/31/58

Contests have long been a standard method of boosting sales, but now many managers and salesmen alike are wondering whether they do more harm than good . . .

What Good Are Sales Contests?

Condensed from The American Salesman

DO SALES CONTESTS do more harm than good? They have become an established part of the selling profession, but what do they really accomplish? Do they result in long-term sales gains? Are they a morale-booster or a morale-buster?

A recent survey of a cross-section of salesmen and sales managers conducted by *The American Salesman* reveals a wide divergency of opinion on these questions. As might be expected, management tends to endorse contests more enthusiastically than do salesmen. This endorsement is based largely on the idea that selling itself is competition—the salesman competing with himself as well as with others. Since increased sales mean increased income, both management and salesmen profit from any additional effective incentives to sell. One such incentive is provided by the sales contest.

Besides the goal of lifting sales in general, contests are often aimed at more specific targets. Among these are successful launching of new products; leveling up of a low-volume season; stirring salesmen to action in new areas or on new accounts.

The American Salesman (April, 1958), © 1958 by American Salesman, Inc.

Virtues of the sales contest most often cited by proponents were these:

1. It works. The vast majority of men involved in a contest invariably show an increase in sales. Thus, even the "loser" wins.

2. It provides an additional method of giving recognition for extra effort. Too often in a large organization salesmen work in an atmosphere of anonymity. The recognition granted through special awards, banquets, sales bulletins, house organs, or local newspapers gives a man important identity and prestige.

3. It is a sure-fire method of shifting product or customer emphasis. By varying contest rules, a company can swing concentration onto new markets—even to unusual selling techniques.

4. It turns hard work into play. Friendly rivalry generated by a sales contest makes it easier to put a little more effort into the job.

Dissenters, on the other hand, most often brought up these points:

1. Contests may create a defeatist attitude among those who for some reason believe that they have no chance to win. Entering a contest

with an attitude of "I'm going to lose anyway," a salesman is likely to live up to his own poor image of himself. And the publication of contest standings does nothing to put these fears at rest. If a man is low on the list, his motivation takes a nose dive; both he and his company suffer.

2. Contest fever can incite such intense intracompany rivalry that organization spirit is shaken. Salesmen may actually withhold information that they think might help their colleagues. In especially close races real hostility may result.

3. The pressure to sell may produce more immediate sales, but at the cost of losing future sales and endangering customer relations by overstocking the buyer.

4. When sales volume becomes all-important, as it often does in a contest, the salesman is forced to become less company-minded. He may neglect slower-moving merchandise, eliminate service calls, postpone development of new accounts—all to make a good showing on the books.

5. When his contest standing becomes the chief topic of dinner conversation for two or three months, the salesman feels driven, not inspired. He feels that his privacy is being invaded, particularly when management bombards his wife with "teasers" about prizes.

The responses of the interviewed salesmen and sales managers point up the depth of the disagreement over the value of sales contests.

The sales manager of a mutual fund company plan pointed to a sales chart in his office. "See that peak? It represents the month we ran our '57 contest. The post-contest

level is a lot lower, sure, but still higher than the level before the contest."

But listen to the sales training director of a company that has abandoned sales contests. "Too many outfits think of the contest as a panacea for slumping sales. It's not that at all. If anything, it can boom-crang by turning a sales staff into a battalion of hard-sell pushers who alienate more customers than they win. When we ran contests, we sometimes got fabulous results—only to find we had glutted the market. Our men were mortgaging future sales and commissions for a prize.

"There simply is no substitute for adequate compensation. Hitch a man's income to what he produces and he's got a year-round incentive."

Those who favor contests say that management can help the salesman to create more diverse outlets for the company line by weighting the rules of a contest to emphasize a specific product.

"The best feature about a contest, from our point of view," says the sales manager of an insurance firm, "is that it provides incentives to concentrate on a particular policy. For example, one of our contests is based solely on the number of expiration dates on competitive auto insurance policies our men dig up and follow through. It's one of the tougher nuts to crack in this business and ought to be specially rewarded. The contest does that."

But in opposition, the sales representative for a giant food firm says this: "I used to be as anxious as anyone to win one of those contests. If I had to move specialty items like

kill kangaroo-tail soup to do it, I moved kangaroo-tail soup. But that meant a few more calls each day to specialty food shops and fancy restaurants and a few less to my bread-and-butter accounts. What was there to prevent my non-contest competitors from moving in while I was chasing a prize? That happened to me once."

The moral is plain: the salesman will profit most in the long run if he takes sales contests in stride and doesn't let the glamor and excitement of winning a prize overshadow the long-range rewards of developing, selling and servicing his normal market.

The psychological impact of the sales contest is frequently cited as one of the most effective sales spurs management possesses. "Salesmanship is competition," is the way the sales manager of a typewriter company puts it. "If you enhance the feeling of good-natured rivalry among a group of salesmen, you've got each man's most precious possession working for you—and himself—his ego."

On the other side of the fence stand those who feel the rivalry can become too intense. "It gets rough in our outfit," reports one large-company sales representative. "The grand prize for the most new accounts is a car.

That's a big enough prize to bring out the worst in some fellows. They go after it claw and fang. I know of at least one case where a friendship hit the rocks for good and neither of the men involved even won anything."

Most salesmen interviewed prefer contests in which they compete against their own past performance or a clearly defined quota. Under some kind of a system that makes it possible for everybody to be proclaimed a winner, the air is kept clear and open communication results. Each man can learn from others, and this sharing of experience generates a contagious enthusiasm.

The chief objection of a hardware salesman to contests centers about their implications. "I can't get over the feeling that I'm being treated like a guinea pig in some laboratory experiment. Increase its food supply and it does what it's supposed to. Withdraw the incentive and it shirks its duties. The whole thing is just a little insulting."

That, management replies, is a misinterpretation. "The sales contest," explains a sales training director, "isn't a form of blackmail. It's a reward for activity beyond the call of duty. A salesman deserves special recognition for superior results." ♦

THE WOMAN BUSINESS EXECUTIVE is much like her male counterpart, a new study by Dr. Margaret Cussler reveals, but there are some differences: (1) Status symbols—especially the big office—are more vital to the woman, to let the visitor know that he's not talking to a glorified secretary; (2) the woman tends to be more emotional about her job; (3) the woman executive tends to isolate her work and social life much more than the man; and (4) although pay differentials are disappearing, a lot of firms still pay the woman less than they do men in similar positions.

—*Business Week* 5/17/58

*Relaxing credit policies
may be risky, but it's
one way to stimulate
flagging sales . . .*

Industry Loosens the Credit Reins

By Charles Obertance
and Jerry Flint

*Condensed from
The Wall Street Journal*

MORE AND MORE companies are loosening their credit terms in an attempt to boost faltering sales. Credit men are giving customers more time to pay their bills and are taking on more "marginal" credit risks—risks they would have shunned a few months ago. Their hope is that the easier terms will generate enough extra business to more than offset the expected increase in credit losses.

"You stick your neck out when you're looking for business," asserts Arthur Grey, treasurer of Chicago Mill & Lumber Co. "We've had to take a good many marginal custom-

The Wall Street Journal (May 23, 1958), © 1958 by Dow Jones & Company, Inc.

ers." His firm's customers now are taking an average of 34 days to pay their bills, compared with an average of 29 days a year ago—with most of the increase coming in the past six recession-ridden months.

John Ogden, the southwest district credit manager for Aluminum Co. of America, concedes that he's more likely to accept marginal customers and be more lenient with delinquents than a few months ago, although at the same time he admits his "problem accounts" have risen 20 to 30 per cent in the past year.

Figures of the Credit Research Foundation confirm the growing collection troubles of the credit men. The foundation gathers data on the credit experience of the thousands of business concerns which belong to the National Association of Credit Men. Overdue accounts—businessmen generally are expected to pay their bills within 30 days—have been running 5 to 8 per cent above a year ago, the foundation reports.

But most businessmen seem to be willing to risk rising losses.

"We could have an entirely clean slate as far as debts are concerned, but we would be hurt in sales," says John M. Whittingham, comptroller of H. C. Smith Oil Tool Co. in Compton, Calif. His firm's "change in approach" on credit, he concedes, probably will mean credit losses this year of about \$20,000, up sharply from losses of \$4,000 to \$5,000 in past years. But he's hopeful the more relaxed policy will bring in more orders and new customers.

Many credit executives indicate it's still too early to tell if their calculated risk is paying off in increased

business. But there's some evidence that it is.

For example, Edmond Chodd, comptroller and credit manager of Dixie Mercerizing Co., a Chattanooga, Tenn., spinner of cotton yarns and synthetics, says the relaxing of standards on risky business "has helped maintain our volume at last year's pace."

A credit official of a steel company indicates that one reason his company is now operating above the industry's average of about 52 per cent of capacity is the fact that more marginal customers are now on the books. About 5 per cent of the company's tonnage now goes to customers that in the past might have been turned down, he says.

Although most credit men say credit losses have not reached a dangerous level, there's no question that they're rising. A major soap maker reports its "losses are the highest since 1941."

"Write-offs are running 50 per cent higher than a year ago and they were high then," says an official of a Michigan factoring firm which handles credit for a host of other companies. "Our clients are giving us more marginal accounts to keep their business going, but we haven't let the bars down completely and we

aren't taking the really off-color accounts."

Some credit losses are a direct result of the recession, of course. But a few credit men believe that a share of the losses can already be traced to their easing of credit policies.

Not all credit managers are giving in to pressures for easing terms, however. Some actually are tightening terms and standards, and a few caution their colleagues about taking on too much risky business.

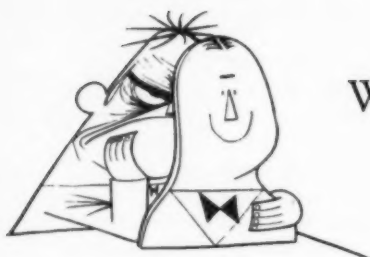
"We're tending to tighten up on credit," says Lionel Schmitt, credit manager of General Hardwood Co. in Tacoma, Wash. He notes that some of the company's competitors are moving in the opposite direction but predicts that "in the long run this will backfire on them."

"If a customer is marginal before a recession, he's a lot more marginal during one," says Harold Schroeder, credit manager of the Marathon Division of American Can Co.

Backing this view is George W. Mitchell, research vice president of the Chicago Federal Reserve Bank. In a recession, he says, "poor risks look even poorer." Many companies so far have resisted the trend to relaxing credit reins, "but the temptation to do so is growing fast," he adds. ♦

SEARCH AND RESEARCH: Research to some so-called investigators is like fashion. They follow the popular fields and shift as the fashion changes. A leader starts a new line of study, all the so-called researchers quickly follow. Fortunately, their number is small. We do not need many researchers; what we need today are searchers.

—Louis N. Katz



What Makes an Emotionally Stable Executive?

By Perrin Stryker

Condensed from *Fortune*

FOR THOSE who would manage others, no quality has been more firmly prescribed than self-control. The first-class executive is expected to display a capacity for controlling his own emotions for the sake of getting a job done. This characteristic of skillful control—and occasional exhibition—of emotions remains among the most important of all managerial traits.

The variety of concepts that executives are likely to connect with emotional stability in managers is astonishingly large. In *Fortune's* survey of executives' ideas about executive qualities, seventy-five executives furnished 152 different concepts about this trait. And most of the definitions show subtle distinctions of attitude and understanding that belie the oversimplified definitions to be found on the common executive-appraisal form.

The concepts ranged all the way from complete continuous control of the emotions to sympathetic expression of feelings about others in the company. Between these extremes were a host of different ideas, including various degrees of control,

self-confidence, the necessity of objectivity, awareness of others' attitudes, etc.

In the definitions given to *Fortune*, the idea of balance, in one form or another, was more frequently mentioned than any other concept, and in some cases was rather specifically described. For example: "avoidance of fluctuations in moods" (Chairman J. Spencer Love of Burlington Industries); "ability to maintain a balance between one's emotions and the pressures that arise in one's work—a balanced reaction to pressure" (Personnel Vice President Lyle H. Fisher of Minnesota Mining & Manufacturing).

Many of the executives recognized in their definitions that a balanced reaction involved the ability to recover from frustrations and setbacks. Thus President Joseph A. Grazier of American Standard sees emotional stability as "the capacity to accept rivalry, disappointment, and defeat without lasting effect on attitude or ambition."

Another popular concept about emotional stability, so far as these executives were concerned, was that

Fortune (July, 1958), © 1958 by Time, Inc.

ally

it implied the dominance of thought and discrimination over opinion and personal prejudices. This was plainly stated by Plant Manager Julian Murrin of American Viscose as "the ability to get the facts, determine action, and act without emotional conflict; normally described as 'both feet on the ground.'" Chairman K. S. Adams of Phillips Petroleum put it somewhat differently: "In an executive, emotional stability means maintaining an even keel in normal or trying circumstances, without letting temperament cloud a decision." The emphasis on calm judgment is not surprising, since this characteristic is generally considered indispensable in executive functioning.

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In describing emotional stability, many executives identified it simply with control of the feelings. To some, this capacity was exclusively identified with the control of angry feelings. Others merely specified the need for "control at all times" or "under pressures." However, several men in the survey made the point that a good executive knows how to blow off steam, as well as knowing how to confine it.

There is literally no end to the things that can upset executives. The job itself is normally beset with opportunities for exhibiting instability. Faced with making decisions where the facts are slim or nonexistent, an executive may become keenly aware of his responsibility for making right decisions, and of submerged doubts about his own abilities. The result may be fear, which may in turn activate other feelings, such as anger or jealousy.

Evidence of these disturbances

frequently crops up, as one industrial-relations man observed, when an executive is "over his head in a job." If he is aware of his inability to solve the problems he is handed, and fearful of his superiors' criticism, he is likely to retreat into hostility and stubbornly refuse to adapt to new situations or to make riskful decisions. He may reveal his inner disturbances by bawling out his subordinates; or he may use a sarcasm that leaves no doubt of the anger he is feeling.

Conversely, emotional instability may be revealed by the frustrations of a limited job. One manager in a large chemical company, for example, who had an excellent record in public relations, had been appraised as unstable because he expressed impatience with the restricted opportunities in that department. Though his superiors recognized his potential ability for other kinds of work, they were reluctant, because of his "instability," to find a spot for him elsewhere in the company.

Some of the complexities of emotional stability are indicated by a list of "characteristics of successful executives" drawn up by behavioral psychologist Chris Argyris of Yale's Department of Industrial Administration. Starting with "a high frustration tolerance," the list includes a wide variety of psychological obstacles overcome by competent executives: the ability to allow others "to discuss and pull apart their decisions without feeling that their personal worth was being threatened;" to "ask embarrassing questions" of themselves; to "try to understand their mistakes without becoming too upset about their personal responsi-

bility for it"; "to accept hostility from others without giving any overt indication that they were hurt very much"; to "dish out" such hostility as gracefully as they could receive it"; to accept victory but "never seem wildly elated"; "to take defeat without feeling that they were 'all washed up'"; "to discipline others without feeling badly"; "to reward others without conveying a paternalistic feeling to the people they rewarded"; and "to motivate themselves through their own self-pride," while they "kept this ability hidden."

Whether emotional stability is an indispensable management trait is a point that can, of course, be questioned. Most of the executives in *Fortune's* survey appear to agree with President Charles Francis Adams of the Raytheon Corp., who thinks that "stability under pressure is absolutely necessary." But some, like David A.

Shepard, a director of Standard Oil (New Jersey), consider emotional stability a useful but not universally essential trait. In labor negotiations, for example, Shepard thought "it would be good to have." However, he added, "The executive who makes his contribution chiefly by having constructive thoughts on how to get new business doesn't necessarily need stability under pressure."

It is easy enough to say that all it takes to calm an executive's volatile emotions is a sense of humor. But over the long pull, an executive will need much more than this, since he cannot endlessly laugh off his frustrations. Most of all, he will need an increasingly penetrating insight into himself and the willingness to accept full responsibility for all his inner feelings and thoughts, as well as for those that can be felt and discerned by others. ♦

The Little Red Schoolhouse, Inc.

THE WIDESPREAD GROWTH of industry-sponsored educational programs since World War II has added an important new dimension to American education, the authors of a recent study believe. Dr. Harold F. Clark and Dr. Harold S. Sloan, who studied 349 of the nation's largest corporations, found that 85 per cent—296 companies—have some kind of educational program for their employees.

The study found that the companies' expenditures on each student "are not infrequently two and a half to three times the national average for colleges and universities." Company-sponsored courses cover a wide range. Some are designed to familiarize employees with the intricacies of the industry or to prepare them for advancement. Others are intended to keep personnel in technical or specialized areas abreast of latest developments. A large number are devoted to good managerial and human relations principles.

The authors of the report consider these activities "an educational force of far-reaching consequences" that is invaluable in "adapting civilization to a new technological era, the ultimate consequences of which stagger the imagination."

—*The New York Times* 4/6/58

With first-rate secretaries becoming increasingly hard to get, it's important to know what they look for in a job . . .

How to Keep a Secretary

By Claire Trieb Slote

Condensed from *Management Methods*

RECENTLY, a young woman walked into the placement department of the secretarial school from which she had graduated and announced, "I'm leaving my job." The head of the placement department was curious, because the girl had previously given a glowing account of her job.

It was true that being secretary to a sales executive was interesting, she said, and her \$85 salary was above average.

"But," she said, "they promised me a raise after a year and when the year was up they said nothing. When I brought the matter up, my boss lapsed into double talk. Then I found out another girl had been hired at a starting salary higher than mine."

She added: "I'll start at lower pay next time, but I want to work for a company that keeps its promises."

Fuzzy company policy on raises seems to be one of the biggest single causes of secretarial turnover. There are, however, many other causes. And with first-rate secretaries increasingly difficult to come by and keep, the practical management man with an eye to the high cost of turnover—about \$200 per secretary—will do well to study the situation from the ground up.

Start with hiring practices. Many

Management Methods (May, 1958), © 1958 by *Management Magazines, Inc.*

employers make their fatal errors at this stage, thus virtually dooming themselves to expensive fiascos later on. Here are some typical errors in recruiting:

1. *Misrepresenting the job.* "He said I'd be dealing with people and I haven't even answered a phone," wails a disillusioned neophyte. Even experienced secretaries complain they aren't working for the man they were hired to serve—or even working in the office they thought they'd occupy. ("Oops, Miss Jones, you're not here in the air-conditioned headquarters; your department is at the downtown office.")

2. *Overselling the job.* It can be disastrous to offer any bait, be it "interesting" work, raises, promotions, travel, responsibility, variety, or anything else—unless you're reasonably sure it will materialize. You're starting the girl off with a built-in grievance.

Even companies with excellent promotion-from-within policies are often so busy describing to newcomers the heights to be reached that they neglect to maintain the actual starting point. If a girl is to begin in a typing pool, say so, and give her some idea of how long she'll remain there.

3. *Misjudging the applicant.* Mary

B. is a competent secretary as long as she isn't overtaxed with responsibilities and decisions. Joan C. is very efficient, but she's shy, and would rather not have too much contact with people. Susan G., on the other hand, thrives in an atmosphere of tension and high pressure. And Carolyn D. is miserable unless she feels she's being given responsibility.

Don't just hire a "company type" who will fit in socially with the overall office group. It is better to get a mediocre girl for a routine job than a ball-of-fire who will leave anyway, and not before causing considerable grief.

The key to successful recruiting is candid, accurate job description. Employment agencies and placement services will be infinitely more helpful to you if they can work from the most precise information you can give them.

What about the secretaries already in your employ—what can you do to keep them from taking to the road? Here are some basic measures:

1. *Raises.* Whatever your policy, state it at the beginning and keep your promises. If you can't keep a promise, explain why.

Many companies feel that by having automatic raises they've licked the pay problem. Actually, the secretary worth her salt wants monetary recognition of the fact that she's doing more than just an adequate job. Automatic raises are usually small. Astute companies usually supplement their automatic raises with larger merit raises. These are admittedly harder for a secretary to come by, and are well worth the additional cost to the employer.

2. *Promotions.* Nothing is more demoralizing to a secretarial force than seeing the big executive-secretary plum go to a rank outsider. Of course, if you don't hire secretaries with an eye to grooming them for top spots, you won't have an eligible employee available when such openings occur. The companies with the most stable secretarial staffs are the ones that follow the principle of promotion from within. This is usually dramatized for the younger women by the presence of high-salaried secretaries known to have started at the bottom.

3. *Procedures.* Recently a secretary left what had started out to be an unusually interesting job with an industrial design firm. "The whole organization," she declared, "is a mish-mash. My boss never needed a secretary; he needs a file clerk. On the other hand, two other men who don't have secretaries load me up with work, and I'm torn all day trying to decide what I'm supposed to do for whom. No one in authority seems to be able to tell me."

If you want a secretary to function efficiently, you must provide an efficiently run office.

4. *Fringe benefits.* Tuition refund plans, saving or stock purchase plans, bonuses, and longer vacations are all benefits that prevent a secretary from seeking greener pastures—but only if she's basically happy with her job.

Finally, what can the individual boss do personally to create the kind of environment that will make a secretary want to stay? Here are some of the qualities most secretaries would like to see in their boss:

1. He respects her personally and

recognizes that she has a mind. He shows his confidence by increasing her responsibilities as she becomes more competent.

2. He goes to bat for her on raises and other matters on which she needs and deserves his support.

3. He's honest in his criticism. When he cannot—or feels he should not—support her, he says so and tells her why. A beginner particularly needs counseling on the job from her boss. He should talk things over with her, pointing out ways in which she can grow on the job and thus be more helpful to him.

4. He doesn't expect her to do his job for him. A fine secretary recently quit, announcing, "My boss detests his work, so he virtually turned it over to me. I'm a secretary, not an executive, and I just couldn't make the decisions or do the work for him."

5. He doesn't overwork her. Ironically, overwork is the occupational hazard of the superior secretary. It's easy for a boss to fall into a let-my-girl-do-it attitude when questions of extra work come up. And if she cheerfully assumes such burdens, he may not recognize the inevitable last straw until it's too late. ♦

Another Look at EDP Costs

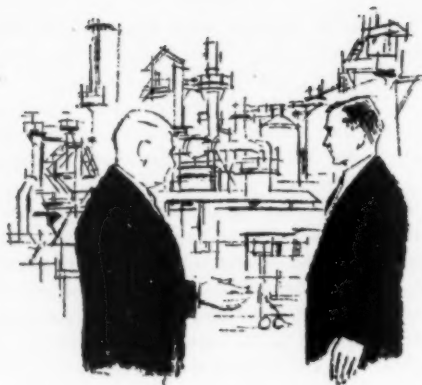
COMPANIES THAT RELY on clerical cost reduction as justification for computer installations are likely to be disappointed, judging from the results of a survey recently conducted by John Diebold & Associates, Inc. Responses from 300 firms that have installed electronic data-processing equipment reveal a variety of experiences:

- 47 per cent of the users of large computers stated that the introduction of the computer has produced very little saving in clerical costs.
- 58 per cent of users of medium-scale and 65 per cent of users of small-scale equipment report similar experiences.
- But 35 per cent of users of large computers report a saving in clerical costs of more than \$50,000 per month.

According to Mr. Diebold, the varied results received from respondents indicate that management is often a major factor in determining the success of a given installation, and management frequently underestimates the costs of EDP and the difficulties and magnitude of the task of planning and control.

In areas other than costs, the survey indicates a good deal of satisfaction with the computer's contribution. Almost 100 per cent of the respondents said that their systems and procedures had been improved; 95 per cent said their accuracy requirements had been met; and 91 per cent expressed satisfaction with their new analyses of data. Expectations of faster management reports were met for 81 per cent of respondents, and expectations for reduction of peak loads were met in 58 per cent of the cases reported.

—Office Management 5/58



Corporate mergers can create more problems than they solve. Here are some of the reasons . . .

Why Mergers Go Wrong

By Mitchell Gordon

Condensed from *Challenge*

WHAT HAPPENS after the merger? The growing popularity of corporate mergers in recent years has somewhat obscured the fact that they can raise more problems than they solve unless the managements of both firms involved give careful thought and preparation to the handling of potential difficulties.

What are some of the rocks on which corporate mergers can founder?

C. Wilson Randle, a partner in the leading management consulting firm of Booz, Allen & Hamilton, puts his finger on the most common difficulty. "Most of the serious problems that grow out of a merger," he says, "are those involving human relationships."

A top executive of a Boston firm that makes surgical dressings can testify to the truth of Mr. Randle's observation. His own company joined forces with a foam rubber company some years back for the sake of improving its product. But the man

who ran the foam rubber concern was set on doing things his way and refused to cooperate with the new management. He had to be removed to keep both businesses from ruin.

In contrast, an eastern watch manufacturer let the president of a newly acquired western electronics concern out to pasture, and then lived to regret the move. The firm lost his old customers who had been accustomed to the personal service he had supplied.

What can be done about such problems? A. M. Sonnabend, president of Botany Mills, Inc., who has engineered almost a dozen successful mergers in recent years, sees to it that his acquisition agreement includes a long-term employment contract with key executives that ties a sizable part of their future compensation to profits. In this way, they have an incentive to go on producing.

Money problems may also lead to

Challenge (June-July, 1958), © 1958 by Institute of Economic Affairs, New York University.

a corporate rift. A little over a year ago, Raymond E. Lee was called in to head the faltering Tel-Autograph Corp., a producer of devices for the remote transcription of handwritten messages. The old management had put the company into some four different lines in less than a year, most of them completely unrelated to the office equipment business. Mr. Lee shed the offshoots as fast as he could. "They all stood in need of considerably more capital," Mr. Lee recalls, "but our main line of business needed the money more."

Mergers with financially weak companies often result in a lowering of morale among the acquired firm's executives once they realize that they cannot rely on financial help to achieve cherished objectives. Management advisers do not give much chance to the money-starved merger unless the act of merging itself opens doors to new capital.

The merged corporations must also have easily harmonized "outside interests." For example, a merger can result in the loss of important customers. Not so long ago, a big construction firm, Merritt-Chapman & Scott Corp., found that the equipment makers it had acquired, Marion Power Shovel Co. and Osgood Co., were unable to make sales to other construction companies because those companies didn't want to bolster the profits of one of their biggest competitors, Merritt-Chapman itself.

Unions, too, can create unforeseen difficulties for the merged enterprise. Generally, their demands will entail raising wages and other benefits to the highest level prevailing in the two concerns. Jurisdictional disputes

can result through failure to sound out unions well ahead of the actual merger.

The merged management must be prepared to face such sticky problems as how previously accumulated seniority is to be calculated in the new concern. If any layoffs are contemplated, it must also take severance pay into consideration when figuring the economics of the proposed merger.

Marketing can also be a problem for the merged management. Executives thrown into new lines of business find they must bone up on advertising and distribution methods. "Usually, the reason a company is up for sales or open to merger in the first place," says Palen Flagler, marketing director of J. P. Stevens, Inc., "is that it isn't doing too well under existing management — and that means the new management must be able to do a better job." Executives who expect to learn too many new ropes too quickly often find themselves losing customers in the process.

Postmerger problems are, of course, endless in number and variety. Knowing that he cannot foresee them all, one highly successful merger architect abides by this philosophy: "No matter how fully I investigate potential problems," he says, "I still go into a merger knowing it looks better than it really is, that every merger has its disillusionments." Thomas J. Rosenberg, a partner in the New York management consulting firm of Anna M. Rosenberg Associates, is in full agreement. "Corporate marriages are no different from human ones," he says. "It's not all wedded bliss after the altar." ♦

MANUFACTURERS' AGENTS:

Salesmen in Absentia

Condensed from Industrial Marketing

FOR THE COMPANY that wants to increase its sales coverage without increasing its regular sales staff, manufacturers' agents can provide the answer. But such a company may find itself very unhappy unless it has a realistic understanding of the agent's function, his attitude toward his work, and the important differences between his position and that of the company's regular salesmen.

A small manufacturer, operating over a limited area but looking for growth and markets farther afield, might find it advantageous to take on agents in marketing centers within a wider radius. Putting out more salesmen is costly and risky; taking on manufacturers' agents involves very little cost or risk. If it produces business, well and good; if not, very little has been lost. A large company can increase its coverage and multiply its sales effort by adding agents in the areas not now covered or by dividing up larger, unwieldy territories and placing agents in them.

More to the point at the present time, perhaps you need more concentrated sales effort to hold on to your share of the reduced business now available. You can do these things at very little expense, and at a predetermined sales cost: the agent's commissions.

The use of agents offers you a much simplified sales administration. You will be freed of the problems of recruiting, selecting, and training salesmen. You will gain the benefit of a sales force and numerous sales offices, yet escape the management problems and expenses that go with maintaining them.

Should you have a limited market, the agent offers you special economies. Revenue from a limited volume of trade may not be sufficient to cover the cost of maintaining a company sales force, but the manufacturer's agent, serving several manufacturers and not being dependent upon one, can provide this limited volume and still make out all right.

The time an agent gives you will be efficiently and effectively applied. Unencumbered by reports, bull sessions, and lengthy accounting for his time and activities, he saves valuable time which he spends on selling effort. And you are very likely to gain a superior quality of sales representation. The industrial agent is often a graduate engineer who possesses a comprehensive knowledge of the market and technical subjects and is accustomed to earning a substantial income. By using such a man, you obtain a high caliber of representation you might not otherwise be able to

Industrial Marketing (June, 1958), © 1958 by Advertising Publications, Inc.

afford. And, since his compensation depends entirely upon his own efforts, he is more likely to be aggressive.

Some manufacturers feel that they sacrifice a certain amount of prestige in selling through agents—that buyers prefer to deal directly with company personnel. Naturally, buyers do not care to deal with incompetent men, but a competent agent knows the line and the company's policies and capabilities. In many fields, buyers actually prefer to deal with agents.

The agent will provide a better accessibility to the trade. He has the respect of the buyers, built up over years of trustworthy dealings. When he recommends something, it has an automatic standing, for he cannot afford to jeopardize his other lines by bringing around an unsatisfactory one. Multiplicity of lines also gives him entry in many places where a salesman would have difficulty.

So much for the rosy side of the picture. In hiring a manufacturers' agent, there is another side to be considered.

The manufacturers' agent is an entrepreneur. He is an independent individual—a businessman in his own right who has risked several years' income on being in business for himself. He fits no special pattern and follows no set rules, but operates in a manner peculiar to himself.

You will not be able to control him as you would your own employed salesman. You will not be able to route his work week or regulate his sales activities. You might not get the attention to minor accounts that you could with a salesman. The agent

knows his territory and where the business is, and he is likely to concentrate on the more promising or substantial accounts.

Direct contact with buyers is lessened, and you will risk a certain amount of stability. Should you and the agent part company, you may find that he can shift a substantial volume of the business to another principal.

Naturally, the good agent is interested in a permanent relationship, and it is well to declare your honest intentions in this regard. In the industrial field it takes many months, even years, to establish a line and build up customers, and during this time there is much work and little profit for the agent. Yet too often manufacturers see nothing wrong with dropping an agent on 90 days' notice when it seems advantageous to do so.

If, after due consideration, you decide you will do well to take on a good agent, how do you go about finding him?

There are a number of avenues available. Advertising in newspapers covering the area in which you are interested or in trade papers, particularly the selling or marketing publications, will bring good responses. Purchasing agents of companies of the type with which you would like to do business might very well help you out. There are also directories of manufacturers' agents in some fields. Usually they are not too complete, but they are still quite useful.

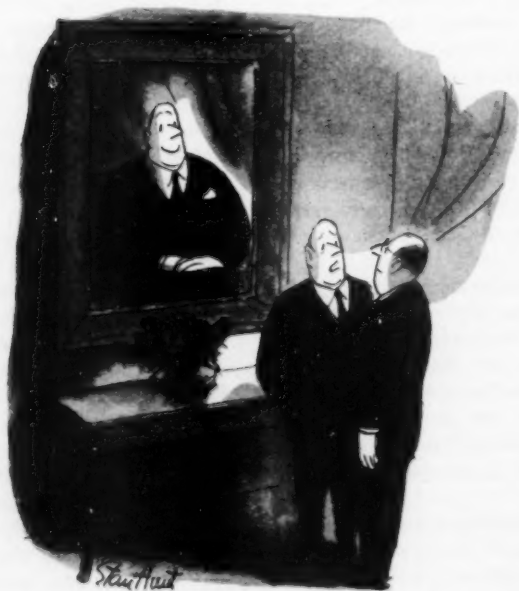
When you start making your contacts, what will you look for in a manufacturers' agent? He will be financially sound and have a good credit standing in his community. He

will be highly regarded by the manufacturers he presently represents and have a sound background in his field. He will have high standards of business ethics and moral conduct, and he will follow sound sales policies.

In turn, he will expect similar qualifications in the people he represents. The agent should be supplied with adequate sales tools. He should have promotional aids and engineering and sales assistance when necessary.

He should have the opportunity to gain an intimate knowledge of the company's products, manufacturing processes, policies, and marketing program.

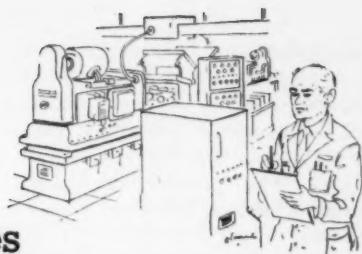
The agent-principal relationship should be one of mutual confidence, cooperation, and integrity. Best results will be obtained only when each party understands and recognizes the basic aims and objectives of the other. ♦



"It was painted just before the recession."

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Putting Products Through Their Paces



By Melvin Mandell

Condensed from Dun's Review and Modern Industry

INDUSTRY is going in for product testing in a big way. In recent years, a number of factors have forced manufacturers to increase their use of meaningful testing and to develop more effective testing techniques. The most important of these factors are:

1. The consumer, both in the home and in the factory, demands and expects evidence of product testing. The shortage of good servicing people to cope with complicated gadgets is intensifying this demand.

2. Unmanned military vehicles (with safety factors sharply reduced to save weight) must be reliable—there's no human driver around to correct for errors. Parts must be carefully tested to insure this reliability.

3. Industry is now investing enormous amounts of capital in production machinery and office equipment. It can't afford down time on huge production machines or giant data-processing computers. Hence the extensive testing, usually of production runs.

4. New destructive forces such as nuclear radiation, ozone, and acoustic

vibration have been discovered or are now more fully understood. Tests to determine whether products can resist these new forces must be developed.

5. Some giant retailers have established or are establishing testing labs to check the goods they sell. Examples are Sears Roebuck, Montgomery Ward, J. C. Penney, and R. H. Macy.

6. Some public utilities are testing home appliances for safety.

7. Both industry and the public have become more aware of testing as the result of a wave of accidental deaths directly traceable to poor product testing or bad design that could have been corrected by proper testing. The electrocution of a two-year-old baby by a TV set was one example.

Yet despite all the talk about testing, some manufacturers still don't bother with it, either because they are ignorant of test procedures or because they don't appreciate the need and the potential benefits.

Fortunately, to meet the demand for better and more intensive testing, the whole art of testing is advancing.

Dun's Review and Modern Industry (April, 1958). © 1958 by Dun & Bradstreet Publications Corporation.

Older techniques, such as nondestructive, accelerated-life, and simulated-environment testing are keeping step with the march of technology, and new techniques are being developed to cope with recently discovered destructive forces, such as stress corrosion.

With the ever-increasing pace of product development today, accelerated-life tests are becoming more and more significant. Manufacturers no longer have several years for thorough field-testing of prototypes. Often, if the new product isn't marketed quickly it will be obsolete before it has a chance to get started.

To meet this need, the well-known techniques of accelerated-life testing are improving steadily. For example, five years ago it took 144 hours of testing to judge whether a coat of paint would last one year. Today, this test takes only eight hours, with a comparable drop in test costs.

Sample testing to destruction is accepted procedure on mass-produced goods. But when the product is a huge, one-of-a-kind piece of equipment, testing to destruction is out of the question. The solution is one of the many nondestructive tests, like the use of plastic models and stress-coating to reveal undesirable stresses, X-rays and ultrasonics to detect subsurface faults, and ultraviolet and magnetic dust techniques to reveal surface weaknesses.

Temperature extremes are the most common environments duplicated in the laboratory. Some other field conditions reproduced under control are: high altitude, salt spray, high humidity, fungus, dust, shock, thermal cycling, acceleration, wear, mechani-

cal and acoustic vibration, nuclear bombardment, and combinations of all these. The costs of simulation run from a few hundred dollars for a one-cubic-foot "cold box" to millions for a nuclear-materials testing reactor or the huge new environmental chamber installed by Douglas Aircraft.

If you don't have a test department, or if you want to reorganize the one you have, you should first hire a competent, experienced, and well-trained test engineer to run your lab. An upgraded technician or a cast-off design engineer won't do.

Although the director of a test laboratory must have the imagination and ingenuity to develop unusual test procedures and testing machines, it's helpful to know that there are several organizations in the country that develop standard test procedures. In textiles, the American Association of Textile Chemists and Colorists in Lowell, Mass., is an excellent source. Consumers' Research in Washington, N. J., often supplies information on its test methods to manufacturers on request. Some of the procedures developed by the American Society for Testing Materials, Philadelphia, apply to end products, such as paint.

Many of the thousands of test specifications prepared by the armed forces apply to products that are essentially commercial equipment with a coat of khaki paint. These specs could be adapted for non-military use. The many nonprofit and independent test labs are also sources of test procedures.

If possible, a test lab manager should report directly to top manage-

ment. If the test lab is under production, there is always the possibility that the test manager will be pressured into approving a below-spec production run. If the lab is part of engineering and development, there is some risk that the test engineer will not adopt a sufficiently critical attitude toward new designs.

One danger that many test lab managers warn against is undue influence from the sales department. Under pressure from sales managers to provide something new each year, many companies hastily add new attachments or accessories to their products. These parts should be thoroughly tested by the company, even if basic design is not affected.

The independent test laboratory plays a many-faceted and vital role in product testing and can be useful

to all types and sizes of manufacturers. For the small company, it provides complete or supplementary test services, designs test procedures, or acts as a consultant when a company is setting up its own lab. For the large manufacturer, the independent lab handles temporary overloads, helps keep the company lab on its toes by checking its tests, and performs acceptance tests on large equipment (with seller and buyer often splitting the costs of the test).

Good product testing costs money and takes time. Even so, it doesn't insure perfect performance, nor does it replace field testing or proper operation and good maintenance. But it's still a lot cheaper than replacing guaranteed parts, taking back the merchandise, or losing customers, a lawsuit, and your reputation. ♦

Is Anybody Listening?

IS YOUR COMPANY COMMUNICATIONS PROGRAM really accomplishing its job? This short quiz may help you to evaluate its effectiveness:

1. Is your communications program a superficial activity, in that it reports only what management wants to say, without regard to the ideas, impressions, and basic feelings of employees?
2. Is it a program that initially received the enthusiastic support of top management, but is now in a state of gradual dilution?
3. Do you talk frankly, telling what's good, what's bad—and why?
4. Do you know precisely what you expect of your communications program?
5. Do frictions within management result in garbled communication?
6. Are your communications devices embroidered with lofty rhetoric, over the heads of (and repugnant to) those you expect to read them?
7. Do you really know how your employee communications devices rate with employees?
8. Do your communications personnel maintain employee-level contacts, so they know the views of the people they write for?
9. Do they keep informed of plant-level problems, so communications can aid in their solution?

—The Score 4/15/58

Some companies are using research
to see themselves as others see them and
improve their public relations . . .

Five ways to measure

PR results

Condensed from *Printers' Ink*

COMPANIES eager to polish up their "corporate image" are calling more and more these days on research to tell them how they look to the public. The demand for more accurate measurement of the results of public relations efforts is bringing about new studies and new methods.

Company public relations departments and outside public relations firms generally hire market research or public-opinion research outfits to do the more extensive evaluations of their activities. Five different approaches are used for this type of research:

Profile surveys. Setting the researcher's sights on the general public is the public relations department's most frequent need. The company's questions seem simple enough: How well-known are we? How do people learn about us? Is our reputation different from others in our industry? What are our assets and our weaknesses?

But approaching the public itself with such questions becomes a complex business. The pitfalls researchers watch for are: too distinct a separation between overlapping groups, too

little reference to the appropriate norms against which the company should be measured, too general a summary of attitudes which fails to reveal how the attitudes got that way or what public relations can do about changing them.

One of the most ambitious research projects has just been released by Opinion Research Corp. as part of its Public Opinion Index for Industry. The main study in this project was an exploratory one comparing 22 national corporations under a uniform set of terms. ORC started the study three years ago in search of a more sensitive measuring-rod for the corporate image than could be provided by piecemeal studies. Two hundred depth interviews were conducted to identify relevant questions and workable hypotheses.

From the plethora of free responses to this unstructured probing, ORC reduced the number of important criteria to a 50-item "reputation profile." Each company is evaluated as a producer-distributor, manager, citizen, and employer.

Besides providing individual and competitive profiles, the ORC survey

Printers' Ink (May 2, 1958), © 1958 by *Printers' Ink Publishing Company, Inc.*

suggests some important findings on public relations for any company. Among them:

1. As companies get better known, they usually get more favorably known.

2. Product reputation is the most important source of ideas about a company. But . . .

3. Product reputation doesn't necessarily wash out criticism of bigness. The same people who praise companies for their products tag them as bad in terms of bigness.

4. Perhaps most crucial, a company may turn in a sparkling balance sheet, yet fail to register in the public mind.

Sub-group sounding. Really a form of market research, this type of study is a direct questioning of interested parties—usually business concerns—about the company's standing in terms of product, service, quality, reliability, reputation, etc. This type of research is attractive to clients because it tells them what the direct complaints are, indicates what they can do about them, and doesn't cost too much. But it's significant only when sharply limited to measurable factors, when properly disguised so the respondent doesn't feel he's snitching on business associates, and when related to the competitive standings of other companies discussed.

Effectiveness studies. Often the effectiveness of a specific public relations campaign is questioned. One of the techniques being used more frequently is the panel—where the same subjects are interviewed before and after the campaign to measure the extent of change in attitude. This keeps the audience constant and in-

sure that true changes are being measured.

However, Elmo Roper and Associates, one of the leaders in the field of PR research, has some reservations about this approach. It finds that the panel test will show almost invariably that a campaign has been effective to some degree. But a recent experiment casts some doubt on the validity of such findings.

After an initial round of interviews, Roper's client started a series of TV programs with institutional commercials. Six months after the program was launched, the same people were reinterviewed with the same questions. On both attitude and factual questions, the results were encouraging, showing from 20 per cent to 100 per cent improvement.

As a check, however, Roper Associates interviewed a completely new panel that had not been interviewed before. The answers might have been expected to be similar to those on the second round of interviewing with the original panel. Instead, they were identical to the answers on the first round of interviews with the original group, showing no effect from the company's campaign.

Roper's explanation: The initial round of interviews focused panelists' attention on this particular company. When they heard the company's message on TV, they were more attentive than the other group, which hadn't been interviewed before the campaign.

Research on specific company actions. Since a company's reputation changes with almost everything it does, it often wants to know how a particular action is influencing the

public. To keep themselves up to date, some companies hire research firms to do spot surveys on topical issues.

Here the requirements are speed and secrecy. Speed is necessary to get at attitudes at the time the issue is hot, and secrecy to keep the company's concern guarded and to get an accurate picture of what people are thinking without directly bringing the issue to their attention.

International Research Assoc. recently conducted such a survey in a community affected by the loss of one of its major industrial employers. Six interviewers conducted 250 interviews in the space of three days. A prepared questionnaire on general economic problems of the community was used as a blind, and the impact of the company's withdrawal was determined by how much spontaneous mentions it received in replies to the questionnaire. The interviewer then had informal discussions with each of the respondents who volunteered the subject.

Motivational probing. McMurry, Hamstra & Co., management consultants and market researchers, theorizes that much of the public attitude toward a company is determined by

factors other than what the company itself does. According to their belief, attitudes toward individual companies are affected by class ideologies toward business in general and big business in particular. Even the individual's personality type will influence his responses toward certain kinds of companies—if he's a dependent type, he might favor large firms.

To test these hypotheses, McMurry, Hamstra recently made a pilot study of 250 respondents for Standard Oil Co. of Indiana. Specially created projective tests brought out responses showing a high correlation of attitudes toward the company with attitudes toward big business in general and with the personality types.

According to Robert McMurry, the survey's findings are disturbing. He interprets them to mean that 75 per cent of public attitudes toward companies are immutable because they are so deeply ingrained.

The challenge to public relations—and to public-relations research—is to find the open areas where people can be reached and the right messages to reach them. Accurate data on public attitudes will make it easier to develop more effective ways of using public relations. ♦

AVERAGE CAPITAL INVESTMENT per production worker rose to an estimated \$16,000 by mid-1957, the National Industrial Conference Board reported recently. The half-year figure, converted to an annual basis, amounts to a \$1,200 increase over the \$15,400 investment per production worker in 1956, apparently as a result of a moderate rise (7 per cent) in investment and a decline of nearly 2 per cent in the number of production workers. Since 1948, only five industries have had a continuous rise in per worker capital investment: tobacco; printing and publishing; petroleum; stone, clay, and glass; and nonelectrical machinery. All other groups have declined at least once, most of them in 1953.



Building a Sound

CAPITAL INVESTMENT PROGRAM

Condensed from Acme Reporter

ALTHOUGH today's executives are equipped with a growing assortment of tools to help them decide the complex issues they face, too many companies still determine their capital investment programs according to the smell of the economic breeze or other equally volatile factors.

The dangers of unsystematic capital budgeting are particularly acute during this time of recession and uncertainty. Without any firm guidelines, some businessmen tend to turn thumbs down on capital projects because of hunches about the future—and thus help bring about the very problems they fear. For the company with a soundly organized approach to capital investment, a period of less active business can be an opportunity. For the cost of new plant and equipment is usually lower; and if in addition it will add to present efficiency, the company can put itself in an excellent position to compete when the market for its products picks up again.

Acme Reporter (1958 Series, No. 2), Association of Consulting Management Engineers.

The problems faced by management in making capital investment decisions break down into three basic questions:

1. *How can desirable projects be generated and screened?* How can good ideas be stirred up and where should they come from? Though any aggressive and imaginative group of top managers can itself be expected to develop good ideas for projects, the largest number of suggestions should come from the lower echelons. The wise management establishes and maintains a climate that encourages individual initiative and creativity at all levels.

Intense analysis of areas like technological advances, the position of competitors, and a company's cost structure can turn up fruitful ideas. But many managers have found that the most effective way to stimulate useful suggestions is through comprehensive long-range planning. In one organization, for example, divisions look five years ahead for each

of their products and for new items just emerging from the laboratories. They study product life, costs, competition, sales percentages, and marketing alternatives until they have developed a set of concrete goals for themselves. This process inevitably turns up sound capital expenditure projects since the plan cannot be fulfilled without new facilities or programs.

Unfortunately, many companies do not integrate their long-range plans—if they have them—with capital budgets. Division managers are permitted to take depreciation reserves and spend them on capital projects without regard for the needs or opportunities of the rest of the company. Capital items are launched on the basis of the division manager's judgment, thus reducing the maneuverability of the firm as a whole.

To screen capital expenditure ideas, many managers build up some kind of system by which they can classify suggestions and measure them against each other. Some companies link all the individual items that are designed to accomplish a single aim. For example, if breaking a production tie-up requires several new pieces of equipment in different parts of the plant, expenditures for all of them are considered as one project.

In addition, capital investments can be divided according to their purpose. One expert has suggested the following breakdown as a helpful one:

Expansion items, which create added facilities and the subsidiary services necessary to increase or launch production and sales of either existing or new products.

Product improvement expenditures to meet or surpass competition in existing lines through better quality, packaging, design, advertising, and so on.

Cost reduction programs, including replacement of equipment, which reduce company expenses by plant redesign, supervisory training, manufacture of parts instead of purchase, or by other means.

Necessity tasks, which have to be undertaken by law, for the protection of employees or for other reasons which directly and immediately affect the company's ability to stay in business.

Strategic investments, like management training, institutional advertising, and basic research, which have a healthy, though gradual, impact on the whole firm.

2. *How can management select the best projects?* In a vigorous and expanding firm the demand for capital is likely to be greater than the supply, and difficult choices must be made between competing projects.

Some businessmen use the length of the pay-out period—the time it takes the return to earn the amount of the investment—as a yardstick. But for many projects this is impossible, since there is no neat and measurable end-point. Furthermore, it overlooks the advantage of extended profitable life which some projects are going to have over others.

Another device is simply "postponability." "What can we chop off this year and what do we absolutely have to do now to keep the roof from falling in?" The trouble with this oversimplified method is that it presupposes no over-all company strat-

egy, but feeds upon a crisis concept of management.

Many companies have found that return-on-investment is the most satisfactory measure for grading different projects. Some cannot be classified this way—notably “necessity” investments, long-term programs with indirect benefits like major public relations projects or management training, or strategic proposals like the search for a specific technological breakthrough. But these can be judged on their urgency or general desirability when the proposals have been sorted and assigned priorities.

3. *Where in the company hierarchy should the decisions be made?*

The final authority, of course, rests with the board of directors, which usually reviews all capital expenditures over a certain amount. However, the screening process—the review of objectives for the long-range plan, divisional proposals, detailed projects—should be handled at various places along the line.

In one company, for example, capital budgeting starts with the establishment of broad divisional and company objectives by top management after review of initial product-

by-product proposals from below. Then specific sales and profit objectives, as guides for the future, are set for each product, and rated lists of capital projects are sent up by divisions to group general managers. From there they go to a top management committee for final formulation of the capital expenditures budget based on a figure arrived at by the key executives after consultation with the treasurer.

Front-office decision-making does not mean, either, that careful training and post-mortems throughout every echelon can be neglected. Capital budgeting is at once a complex and a decisive process in any company, and should be widely understood and constantly improved. Actual project outlays and returns should be compared on a periodic basis against original estimates. Such post-mortems not only serve to keep departmental estimates realistic, but also provide a basis for improving techniques for projecting sales, costs, and margins. In fact, the more that management takes advantage of the modern tools available to it, the more stable and sound their capital investment programs are likely to be. ♦

DO PENSION PLANS really cut down labor turnover? Evidence that they do comes from the U.S. Department of Labor. Here are the annual turnover rates per 100 employees by age groups:

Age	COVERED BY PENSION PLAN		NOT COVERED BY PENSION PLAN	
	Hirings	Separations	Hirings	Separations
Under 45 . . .	47	42	80	71
45-65	16	16	47	46
Total, all ages.	37	34	67	62

Areas covered by the survey were Detroit, Los Angeles, Minneapolis-St. Paul, Seattle, and Worcester, Mass.

—*Industrial Relations News*

Keeping the Lid on HEALTH INSURANCE COSTS

Condensed from the TPF&C Letter

WHY ARE THE COSTS of company health insurance plans rising so drastically and what can be done about it? More and more companies are wondering if steps can be taken to control these costs without weakening the quality and scope of the coverage which contributes so much to maintaining employee health and morale.

Many factors behind the rise of medical care costs are, of course, beyond the control of any individual company. The most obvious of these is inflation. Another is the increasing pace of medical progress. A new machine in a hospital does not necessarily mean lower unit costs and increased production. Instead, it signifies the development of new and often costly techniques to improve medical care.

There are, however, areas in which savings can be made in health insurance programs. The plan itself can be designed in such a way that it is difficult for the patient to make claims for unnecessary medical expenses. There are many cases in which unneeded hospital services are supplied because the patient isn't charged for them—or because it makes it more convenient for the patient, doctor, or hospital. For example, employees covered by health

insurance plans don't hesitate to ask their physicians to confine them in a hospital for a series of diagnostic tests which could be given as well in the doctor's office, a clinic, or on an out-patient basis. This creates a double cost, since the plan not only pays for examinations that perhaps were never intended to be covered, but for room and board as well.

Claims administration is another area in which savings can be achieved. Traditionally, speed has been the watchword in regard to claims payments. The emphasis has been on collecting the data needed to support payment of claims, and little attention has been given to evaluating the reasonableness of the charges in relation to the illness.

Double coverage—where benefits are available simultaneously from more than one source—can result in unnecessary expenses for the company health insurance plan. Automobile, accident, and homeowners' policies often provide medical benefits duplicating those payable under an employee group hospital-surgical plan. A husband and wife who work in different companies may each be eligible for benefits from both plans.

Many large companies have found that they have much higher loss

The TPF&C Letter (May, 1958), Towers, Perrin, Forster & Crosby, Inc.

ratios in locations where double coverage is prevalent than in areas where it does not exist. The availability of double coverage overcomes most employees' reluctance to enter a hospital. Some discover that they can actually make money by doing so. The result is, of course, an increase in the number of hospital admissions and the cost of the employer's plan.

What can be done about all these unnecessary costs? For one thing, meaningful statistics are needed to assist in pinpointing problem areas: Is there a disproportionate number of one- and two-day hospital claims? Were they really necessary? Are people staying in the hospital beyond the date they would normally be released if they didn't have insurance? Is more information needed to evaluate the claim in relation to the diagnosis?

A large corporation with plants scattered throughout the country must establish area norms before proper evaluation of claims can be made. The cost of medical care in New York City, for instance, is more than twice as great as in many rural areas. Moreover, medical practices vary from one area to another.

Statistics should be broken down even further, if possible, by keeping a record of claims on each employee and each doctor. This information would enable plan administrators to determine if one or both is taking advantage of the plan.

In designing a health insurance plan or making changes in an already established plan, a company would be wise to follow these four general principles:

1. Encourage employees to receive treatment out-of-hospital, where the cost is lower.

2. Make provisions for employees to pay an initial deductible. Benefits should be payable only when reasonable budgetary limits have been exceeded.

3. Give employees as much incentive as possible to keep costs down.

4. Provide broad coverage and high benefit limits.

One effective means of reducing the costs of company health insurance is a preventive medicine program. A system of physical examinations for employees could be the start of such a program, and would more than pay for itself in terms of reduced absenteeism. Preventive measures would also lower the cost of medical care benefits. During the first two or three years, it is true, claims costs would probably rise, because employees would be encouraged to take care of ailments uncovered by the preventive examinations. In the long run, however, there will be substantial savings, since many illnesses will have been cured which would have resulted in much higher claims at a later date.

Finally, a continuing educational program for employees and the community can lead to lower costs for health insurance plans. It should be clearly pointed out that there is no magic in medical care coverage, that company and employee contributions are only a pool from which the employee can draw if necessary. Taking unnecessary advantage of the plan, it should be stressed, will eventually result in reduced benefits, increased cost, or both. ♦

BRIEF SUMMARIES

of other timely articles

GENERAL

BUSINESSMEN IN GOVERNMENT: AN APPRAISAL OF EXPERIENCE. (The Publication Office, Division of Research, Baker Library, Harvard Business School, Boston 63, Mass.), 1958. \$1.00. In order to determine the extent of the federal government's need for business executives in top-level positions, the advisability of their participation in government, the qualifications required for such positions, and the present situation with regard to executives in government, questionnaires were sent to 8,500 business executives and top career civil servants throughout the country. The resulting report gives a profile on the executive in government, discusses the various aspects of a federal job, and concludes that there is a lack of interest in government service throughout the business community—a lack which the authors deplore and for the remedy of which they offer several recommendations.

THE CONTROVERSY OVER NUCLEAR POWER. By Leslie W. Dunbar. *Current History* (Wolfpit Road, Norwalk, Conn.), May, 1958. 65 cents. Is it fair to the taxpayers, and expedient for the economy, to have nuclear power developed and marketed through privately owned utilities? After discussing the civilian purposes to which atomic energy has been put since the Atomic Energy Act of 1946, the author concludes that (1) since private utilities supply the greatest share of the country's electricity, they are likely to be the principal heirs to nuclear energy, and (2) the A.E.C.,

though subject to criticism on several scores, is our best reliance for purposeful leadership in nuclear power.

ON THE MEANING OF EXECUTIVE QUALITIES. By Perrin Stryker. *Fortune* (9 Rockefeller Plaza, New York 20, N.Y.), June, 1958. \$1.25. Results of a survey of 150 high-ranking executives on the definition of such generally accepted "executive qualities" as dependability, integrity, stability, etc., show that these terms have a host of private meanings for individual executives. In this first-of-a-series article, the author evaluates the various means of executive appraisal that have been developed: the listing of "essential qualities" for executives; the psychological approach of behavioral scientists; and the individualistic view that opposes the practice of trait appraisal altogether.

INDUSTRY'S LEADERS SIZE UP THE PROFIT SQUEEZE. By Kenneth Henry. *Dun's Review and Modern Industry* (99 Church Street, New York 8, N.Y.), May, 1958. 75 cents. Few U.S. companies anticipate better profit margins during 1958, but a majority expect a business upturn in the year's fourth quarter, judging from the latest survey of the *Dun's Review and Modern Industry* panel of 100 company presidents. Reporting that, for the average company surveyed, net profit as a percentage of sales slipped from 6.1 per cent in 1956 to 5.7 per cent in 1957, with a further drop to 5.4 per cent expected in 1958, the author describes what the presidents

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are doing to cut costs and improve their profit margins, how they are reallocating their budgets, and their views on the effects of taxation, government spending, tariffs, and fiscal policy.

THE "INVISIBLE" UNEMPLOYED. By Daniel Bell. *Fortune* (9 Rockefeller Plaza, New York 20, N.Y.), July, 1958. \$1.25. Though unemployment during the 1957-58 recession hit primarily the Negro, the semiskilled, and the young worker, its long-range effects may be far reaching throughout the entire population, according to the author. In analyzing the recession, he suggests that the following results may occur: (1) the middle-class buying habits of workers may change; (2) renewed loyalty to unions may arise; (3) Democratic victories in November and in 1960 may result; and (4) the number of jobs in some badly hit areas may be permanently decreased.

HOW TO BE YOUR OWN ECONOMIST. *Sales Management* (386 Fourth Avenue, New York 16, N.Y.), May 16, 1958. 50 cents. As an aid to executives who want to keep informed on the relation of their business to the economy as a whole, *Sales Management* has listed and described thirty important quarterly, monthly, and weekly economic indicators. The address and the cost of the original source publication are given

WHY SMALL COMPANIES MAY NEED AUTOMATION. By Robert M. Smith. *Office Management* (212 Fifth Avenue, New York 10, N.Y.), June, July, and August, 1958. 45 cents each. In determining whether automation should be applied to clerical work loads, the variety of information to be processed is a more reliable criterion than actual company size, the author maintains. In this three-part article, he stresses that, although small companies have rightfully shied away from installing giant computers, automation on a much simpler scale may well suit a company's needs.

for each of these indexes, and information is included on the two standard secondary sources that reprint most of the series periodically.

TWENTY YEARS OF CORPORATE EARNINGS. By Sidney Cottle and Tate Whitman. *Harvard Business Review* (Soldiers Field, Boston 63, Mass.), May-June, 1958. Reprints \$1.00. To answer many specific questions that arise in connection with top-level policy decisions, pension fund investment, stockholder relations, mergers, and other management activities, a consistent body of factual information on the earnings performance of our major industries is a necessity, the authors believe. Based on a four-year research project covering some 150 corporations, this article presents, in summary form, a broad comparison of the long-run earnings performance of 33 major industries over the period from 1935 through 1955.

BETTER BUSINESS RELATIONS THROUGH PLANT TOURS. (Business Relations Department, Chamber of Commerce of the United States, Washington 6, D.C.) 50 cents. On the assumption that plant tours go a long way toward creating good community relations, this pamphlet offers guideposts on how to conduct "interpretive tours"—tours that will be meaningful to the visitor from a civic and personal standpoint.

OFFICE

A PROCEDURE FOR MICROFILMING RECORDS. By Frank W. Bobb. *Office Executive* (1927 Old York Road, Willow Grove, Pa.), May, 1958. 50 cents. Because microfilm reduces the amount of clerical labor needed for typing copies of record information, will last for more than 100 years, and is less of a fire hazard than paper, it is fast becoming established as a record-keeping tool, the author states. In this detailed how-to article, he describes the procedures involved in classifying, processing microfilming, and indexing business records.

PRODUCTION

INDUSTRIAL WASTES GO TO WORK.

Business Week (330 West 42 Street, New York 36, N.Y.), May 24, 1958. 50 cents. A waste liquor of the steel industry is now being recovered as usable sulphuric acid and high-quality iron oxide; organic wastes from a pulp and paper plant in Norway are being converted to fuel; contaminated water is being reclaimed through a new process—all instances of the industrial trend to put process wastes to good use, this article reports. Examples are given of new treatment techniques in the steel, oil, paper, and chemicals industries that not only solve sanitary problems more efficiently but result in considerable savings.

THE ABC'S OF MACHINE-HOUR RATES.

By Spencer A. Tucker. *American Machinist* (330 West 42 Street, New York 36, N.Y.), May 5, 1958. 75 cents. Machine-hour-rate costing — which is based on the money spent to operate a machine or work center for one hour—is the most realistic costing system for a shop with a variable product or volume mix, the author believes. After pointing out the inadequacies of some of the typical costing systems in use, he gives a detailed account of the machine-hour-rate system, including the grouping of

costs into functional classifications, the projection of the operating budget, and the testing of the cost system. Illustrated with tables.

VALUE ANALYSIS IN ACTION.

Purchasing (205 East 42 Street, New York 17, N.Y.), May 12, 1958. 75 cents. Value analysis is being used profitably as an advanced purchasing tool by companies with annual volumes ranging from \$6 million to \$600 million a year, say the editors of this special issue, who have compiled articles describing actual programs now being used in industry. In addition to covering the techniques and applications of value analysis, the issue contains many case histories of cost reductions achieved through the use of new products, new processes, and new applications.

NEW PRODUCTS ISSUE.

Flow (812 Huron Road, Cleveland 15, Ohio), May, 1958. 50 cents. A special issue devoted to new products in the field of material handling. Among the many items of new equipment introduced are powered trucks, in-plant containers, conveyors, overhead equipment, manual equipment, elevators and lifts, bulk handling equipment, packaging supplies and machinery, and shipping aids.

MARKETING

DO AD READERS BUY THE PRODUCT?

By Daniel Starch. *Harvard Business Review* (Soldiers Field, Boston 63, Mass.), May-June, 1958. Reprints \$1.00. Though research has made it possible to determine what advertisements people read and whether they buy the product within a reasonable time after reading the advertisement, the advertiser's real problem is to find out to what extent purchases by readers are actually due to the reading of the advertisement, the author points out. Using advertising case histories to illustrate the difficulties involved in finding the solution, he states

among his conclusions that sheer tonnage of ad-reading impressions is an important factor in building a high volume of buyers and current users.

AMERICA'S SHOPPING-CENTER REVOLUTION.

By Art Zuckerman. *Dun's Review and Modern Industry* (99 Church Street, New York 8, N.Y.), May, 1958. 75 cents. Some 2,500 shopping centers now in operation are estimated to gross about \$35 billion annually, the author reports, and as many as 1,400 are expected to appear within the next two years, bringing the total shopping

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AUGUST

center business up to an annual \$71 billion gross. In this article, he traces the development of these planned centers, discusses their effects on downtown merchants, and evaluates the fundamental changes that they have made in the U.S. marketplace.

SPECIAL SECTION ON TRADE SHOWS. *Industrial Marketing* (200 East Illinois Street, Chicago 11, Ill.), May, 1958.

FINANCIAL

CHALLENGE TO PUBLIC ACCOUNTING.

By Leonard Spacek. *Harvard Business Review* (Soldiers Field, Boston 63, Mass.), May-June, 1958. Reprints \$1.00. The shortcomings of professional accounting today are apparent in the discrepancy between the financial position shown in published financial statements and the common uses and interpretations placed on these statements by stockholders and the public, according to the author. After questioning many accounting practices and conventions, he proposes that a research organization be established to set forth basic accounting assumptions and authoritative principles for the guidance

of industry and the accounting profession.

SHORT-TERM FORECASTS IN INDUSTRIAL COMPANIES.

By Guenter Zimmermann. *The Journal of Accountancy* (270 Madison Avenue, New York 16, N.Y.), May, 1958. 85 cents. The method for forecasting financial needs and profit expectations for medium-sized companies that is described in this article is completely foolproof, the author claims. To illustrate the basic principles of the method, he makes use of four schedules that theoretically cover all applications, accompanying his examples with tables.

PACKAGING

PACKAGING: ITS GROWTH AND ITS FUTURE.

Printers' Ink (635 Madison Avenue, New York 22, N.Y.), May 23, 1958. 25 cents. Since the outbreak of World War II, when it was grossing \$2 billion a year, packaging has grown to an industry that last year shipped more than \$10 billion worth of materials—from steel drums to plastic squeeze bottles. This two-part article examines the growth of major segments of the packaging industry—paper, metal cans, glass containers, and plastics and flexible packaging—and predicts the future of packaging during the next ten years, as seen by seven prominent men in the field.

DESIGNING FOR THE SUPERMARKET.

By Ralph Caplan. *Industrial Design* (18 East 50 Street, New York 22, N.Y.), May, 1958. \$1.50. The evolution of the clerked retail food store to a self-service operation has shifted the emphasis from the salesman to the package designer, who must now do the clerk's job *in absentia*, observes the author. Among the designer's problems he mentions the cold impersonality that confronts housewives, the fierce competition for shelf space in the supermarket, the difficulties in making a package stand out from any angle, and the big job still to be done in designing and merchandising nonfood items.

FOREIGN OPERATIONS

RECESSION RENEWS INTEREST IN U.S. SALES OVERSEAS. *Printers' Ink* (635 Madison Avenue, New York 32, N.Y.), May 9, 1958. 25 cents. A dollar spent in marketing and advertising abroad is likely to yield more in revenue than one spent in this country, according to this article, which points out that profits, especially in Latin America, are generally higher, and that foreign trade can bring returns even when domestic markets go soft. Outlining the marketing and merchandising methods of some U.S. companies operating successfully overseas, the article discusses the future of foreign markets and predicts an increase of competition abroad.

✓ **GEARING YOUR SALES TO THE EUROPEAN COMMON MARKET.** By Alexander O. Stanley. *Dun's Review and Modern Industry* (99 Church Street, New York 8, N.Y.), May, 1958. 75 cents. Despite the great new customer potential in the European Common Market, the outlook for most direct exporters is gloomy, predicts the author, suggesting as an alternative local participation through branches, affiliates, and

licensees. Among the points to be considered in choosing an overseas site, he lists customer concentration, access to raw materials, transportation facilities, housing, local taxation and currency values—and especially the revision of licensing agreements in the light of new ECM conditions.

JAMAICA: DOOR TO PROFITS IN THE WORLD MARKETS. *Management Methods* (22 West Putnam Avenue, Greenwich, Conn.), May, 1958. 75 cents. Thanks to Jamaica's tourist trade and bauxite supply, its government's attractive array of tax, duty, and financing benefits, and the easy access to untapped "soft currency" markets, the island is becoming a business paradise, reports this article. Particular emphasis is put on the Industrial Development Corporation, which will assist a prospective new industry by making complete market surveys, finding plant sites, screening workers, determining costs of initial operation, setting up books—and even building a factory to specifications and renting it for 10 per cent per year of the building's cost.

INSURANCE

EARNINGS LOSS CAN BE PREVENTED. By A. G. Jeter. *The Casualty and Surety Journal* (60 John Street, New York 38, N.Y.), May, 1958. \$1.50 per year. Use and occupancy coverage (also widely called business interruption coverage) is designed to provide protection for three basic items of loss when plant or equipment has been damaged or destroyed: (1) loss of profits, (2) expenses that necessarily continue during the interruption of business, and (3) extra expenses incurred in order to minimize the interruption. In this article, the author discusses the features of this type of coverage under a boiler and machinery policy that make it possible to fit the coverage and premiums to the particular exposure found in an individual plant.

FIRE PROTECTION FOR PROFIT — A MAJOR CHANGE IN BASIC POLICY. By Paul D. Smith. *The Weekly Underwriter* (116 John Street, New York 38, N.Y.), April 26, 1958. 25 cents. Industrial profits today are more vulnerable than ever to the interruptive effects of destructive occurrences, the author says, and the only sound method of counteracting this increased vulnerability is the development of a loss-prevention program specifically geared to the protection of profit. In this article, he outlines a method of rating plants and property in accordance with their importance to operations and profits, making a hazard evaluation of critical plants or areas, and taking effective and economical action to correct or minimize hazardous conditions.

What to Do Till the Doctor Comes

(Continued from page 8)

his privileges, allotting particular times for the consultant's outside activities, management can often eliminate such criticism.

7. Conflicts among consultants

Another hindrance to the full economic utilization of consultant assistance are the conflicts that at times arise between individual consultants. Attempts to undercut or discredit an associate or to gain credit personally at the ultimate expense of colleagues are a hazard when they carry over to the premises of the company and affect the work there. Naturally, much of this conflict is *sub rosa* and does not come to the attention of the company, but it can leave recognizable traces on the activities of the consultants.

Personnel sent by the consulting firm to service a company should be interviewed and passed upon by a responsible executive before being accepted. Since he will be dealing extensively with the consultants, he should get to know them—both to detect any friction between them and to avoid possible personality conflicts with the members of an operating group.

A BASIS FOR ACTION

Naturally, the suggested solutions to these potential trouble spots will not always be practicable when applied to particular cases in particular industries. Solutions must be worked out on an individual basis. We can, however, outline several basic principles that can be applied to minimize the possibility of conflict.

1. The consultant's position, his duties, and the extent of his authority should be clearly delineated, and a concerted effort should be made to see that all who will be concerned understand what is involved. This applies not only to those who will be working directly with the consultant, but those whose contact will be more remote. The statement of duties of the consultant should be fairly detailed, setting forth not only his responsibility and authority, but such matters of lesser importance as availability, location, and phone number. Checks can be made occasionally to see that people understand precisely what their positions are relative to the consultant

and that nothing has arisen to make revision necessary or desirable.

This suggestion points up the necessity of an efficient and rapid two-way communication system. In this case, the system must quickly get accurate information to the people who are likely to deal with the consultant—and it must be sensitive to areas of friction so that action may be taken before the consulting program is seriously disrupted.

2. The reasons for hiring the consultant should also be made clear. In addition to outlining the specific problem with which he has to deal, the more general reasons should also be noted: The value of his objectivity toward the company and its problems; his ability to concentrate all his efforts on one particular problem, without the distraction of administrative duties; and so forth.

The fact that the presence of the consultant in the company does not imply criticism of the employees or their supervisors should be made repeatedly and abundantly clear. This reassurance is an important means of smoothing the path of the consultant.

It is at this point that possible conflicts with qualified personnel within the company should be resolved, and their position with regard to the consultant should be spelled out clearly. If the company has no such personnel, this fact should be clarified.

A company that has a form of communication aimed directly at the managerial group or some portion of it has an excellent vehicle for spreading official information about the consultants. Rumors are less likely to start when information about the consultant comes from official sources at an early date—preferably before he makes his appearance.

3. The consultant should report as high up in the company's organization as is compatible with his duties. This insures that his recommendations will receive prompt high-level attention, and that their implementation will be more rapid. In addition, the higher the level, the less chance for company politics to play a part.

Having the consultant report to a high level of management also reduces much of the jealousy that might be felt concerning the remuneration of the consultant. Where the highly paid consultant deals with a highly placed executive, economic envy will not exist.

4. The selection of a consulting company is an extremely important one. Its professional reputation, financial position, and

ethical code should be investigated before a selection is made. When a large and reputable auditing firm is already serving a company, their recommendations concerning consultants are often valuable.

5. Recommendations and suggestions by the consultant should be made to the executives concerned—and not in the presence of other personnel. This allows for negotiation and discussion between executive and consultant and prevents tentative plans from being subject to rumor before the actual firm decisions are made.

When recommendations are announced, they should come from a company spokesman rather than from the consultant. This gives the decisions the necessary degrees of authority and places the responsibility where it ultimately belongs. More importantly, it does not undermine subordinates' confidence in their leaders.

SMOOTHING THE WAY

With the outside specialist being utilized more and more to help companies solve the complex problems of doing business, it is more important than ever that management make the best use of his special knowledge and abilities. But no matter how good a consultant may be, his work can be hindered—or even negated—if his presence in the company arouses antagonism, fear, and hostility. With so much at stake, it's just good sense for management to make the comparatively small investment of time and effort needed to smooth the way for the outside expert, for only then can the company reap the full benefit of his professional services.

A Lean and Hungry Look . . .

EXECUTIVES ARE GETTING THINNER, judging from the results of a Life Extension Examiners' study of 5,000 managers recently disclosed by the Health Insurance Institute. In the past 15 years, the number of executives more than 10 per cent above normal weight has been reduced a third—from 29 per cent to 15.2 per cent. Under age forty, the percentage of overweight executives is now 11.2.

The main reason for this change, according to Dr. Harry Johnson, medical director of Life Extension Examiners, is that more executives realize that keeping their weight down is important to their total personal health. Business and industry-sponsored health programs, through regular health examinations, have helped to focus attention on this phase of keeping well.

Developing New Products for Profit

(Continued from page 13)

ment activity proceeds. Progress is measured against the goals and specifications set earlier, and the effect of any changes in the product or in the program is reviewed and measured.

The *testing* stage involves both final engineering testing and preliminary market testing. The final stage is the *commercialization* of the product. This involves releasing it for production and taking the final steps in the build-up of the sales program. At the conclusion of this stage, the product is on a profit-and-loss basis.

NARROWING THE FIELD

The number of proposals reviewed decreases drastically at each stage of development. Of 1,000 proposed ideas, for example, probably less than 10 per cent will get through the screening stage and 1 per cent or less through the business specification stage. Meanwhile, the cost put into carrying proposals forward increases rapidly through at least the development stage.

The critical point occurs in the business specification stage. Before this stage we have been reviewing many proposals in a general way, but after this point the company will be investing sizeable funds in engineering development effort—money that will be lost if a profitable commercial product is not obtained.

At this important stage, then, the variety of facts, guesses, and estimates uncovered during the previous steps must be separated into two categories for final evaluation and decision. The first category involves the intangible risk factors. These are points of advantage and disadvantage that cannot be reduced to numerical terms. They include product fit with the present business, the possibilities of future growth in lines allied to the proposed product, the probable reactions of competition, and the general chances of success for the proposed program. These points include the guesses, the "feel," and the judgment factors.

ANALYZING THE MEASURABLE RISKS

The second category of factors to be assessed at this point involves risks that can be defined and measured in terms of dollars: engineering cost estimates, production cost estimates, market forecasts

of sales volume at various price levels, and organizational costs of getting into business. These factors should be analyzed separately, since they are more tangible than the first group.

One means of performing this analysis is to use a table, such as the one designed and used by the new products subcommittee at AMF (see page 70). The purpose of this table is to aid in the listing and analysis of the tangible factors obtained in the business specification studies. The goal is to arrive at a single figure that can be weighed against the intangible risks previously mentioned.

The first seventeen lines of the table constitute a pro forma profit-and-loss statement of the operation by year. Costs and expenses through line 7 are restricted to "normal" items, resulting in the "normal" profit of line 8.

The second section (lines 9 through 14) covers the nonrecurring expenses that are required to get the enterprise started. Production and marketing start-up expenses are included, as well as product development and tooling. These one-time costs are separated from the "normal" costs to facilitate analysis as well as later changes in the forecast.

The after-tax cumulative profit and loss is shown in line 18 to indicate the flow of speculative funds required for the program. At this point, the estimated working capital requirements are also shown (line 19), so that we can calculate the actual funds tied up at any point in the program. The speculative funds are not combined with working capital on this sheet, however, since working capital involves a relatively low order of risk and should not be confused with risk capital in evaluating the program.

The fact that working capital will be tied up is recognized, however, by levying an artificial working capital charge against the enterprise (line 20). This charge is deducted from the profit after taxes to give a "criteria" investment, which is used to calculate the discounted rate of return on the speculative investment.

USING THE TABLE

The example shown outlines a business based on a hypothetical new machine with a potential market of 2,500 units and an attainable market of 80 per cent, or 2,000 units, within ten years. The rate of sales build-up and decline of this particular unit is

FIGURE 1.

FINANCIAL PROJECTION AND ANALYSIS FOR A PROPOSED NEW PRODUCT

	(All figures in thousands of dollars except unit sales)		1st Year	2nd Year	3rd Year	4th Year	5th Year	6th Year	7th Year	8th Year	9th Year	10th Year	Totals
	Penetration:	Basis											
1. Unit Sales		80%					50	300	450	500	400	300	2,000
2. Sales at \$10,000 per unit		100%					500	2,000	4,500	5,000	4,000	3,000	20,000
3. Normal Mfg. Cost at \$5,500 per unit		55%					275	1,650	2,475	2,750	2,200	1,650	11,000
4. Normal Mfg. Profit		45%					225	1,350	2,025	2,250	1,800	1,350	9,000
5. Normal Marketing Expenses		15%					75	450	675	750	600	450	3,000
6. Normal Product Engineering		1%					5	30	45	50	40	30	200
7. Normal G. & A.		4%					20	120	180	200	160	120	800
8. Normal Profit		25%					125	750	1,125	1,250	1,000	750	5,000
9. Production Start-up Expense						40	100						140
10. Marketing Start-up Expense					10	50	150						210
11. Product Development			80	110	120	40							350
12. Tooling						150							150
13. Misc. & Contingencies (30% of Dev. & Tooling)			20	30	40	50	10						150
14. Total Non-Recurring Expenses			100	140	170	330	250						1,000
15. Pretax Profit (Loss)			(100)	(140)	(170)	(330)	(135)	750	1,125	1,250	1,000	750	4,000
16. Income Tax Provision		50%	(50)	(70)	(85)	(165)	(67.5)	375	562.5	625	500	375	2,000
17. Profit After Taxes (Line 15—Line 16)			(50)	(70)	(85)	(165)	(67.5)	375	562.5	625	500	375	2,000
18. Cumulative Cash Flow			(50)	(120)	(205)	(370)	(437.5)	(62.5)	500	1,125	1,625	2,000	—
19. Working Capital Requirements		50% of Sales					250	1,500	2,250	2,500	2,000	1,500	—
20. Working Capital Charge		5%					12.5	75	112.5	125	100	75	500
21. "Criteria" Investment (Line 17—Line 20)			(50)	(70)	(85)	(165)	(80)	300	450	500	400	300	Discounted Rate of Return 31.5%

forecast at a selling price of \$10,000. Estimates of all expenses necessary to build up and maintain a marketing organization are made and entered in the table.

Engineering development cost estimates and manufacturing, tooling, start-up, and production costs are also developed and entered, together with normal product engineering and appropriate general and administrative expenses. In this particular case, the product development and tooling expenses are burdened with a 30 per cent miscellaneous and contingency allowance.

The working capital requirements are forecast at 50 per cent of annual gross sales, and the charges on use of working capital are assessed at 5 per cent after taxes.

Thus, the business estimated for the proposed machine amounts to \$20 million gross sales over a six-year sales period. Preceding this is a four-year engineering development, testing, and tooling-up period which, together with initial marketing expense, will cost \$1 million. Most of this money must be committed before any return can be anticipated.

In order to compare this investment with other investment possibilities, the "criteria" investment is obtained and the discounted rate of return on investment is found to be 31.5 per cent. The discounted rate of return represents the rate at which compound interest would have to be earned by the outstanding investment in order for the interest plus the principal to provide sufficient funds to pay the cash flow-backs anticipated at the times predicted. This one figure can serve as a realistic measure of the desirability of the venture, and it is an important criterion in evaluating the proposal as a favorable or unfavorable company move.

THE ALL-IMPORTANT PROFIT MOTIVE

The table as a whole can also serve as a measuring device during each succeeding stage of the product's evolution. As the development, testing, and commercialization stages proceed, the effect of changes or further refinements in each of the estimates and forecasts can be readily seen. The rechecking and re-evaluation necessary throughout a new-product program is thus focused on the ultimate effect of each change on the over-all business picture. Decisions made can be based on their net effect on the profit goals.

Particular care must be taken to be as realistic as possible in each of the estimates and forecasts. Overestimating the costs or underestimating the market for the sake of conservatism can quickly reduce the forecast rate of return to an uninteresting level. The converse, of course, is equally true: Underestimating costs could lead to heavy losses before the realities become evident.

Of course, a table such as this can never be the sole criterion in deciding for or against a program. Patent position, potential competition, product fit, growth potential of allied lines—these and many other factors must be considered in judging whether the project's goals are both attainable and worthy of the company's efforts.

Properly used, however, this type of financial analysis is a valuable tool in putting the pieces of the project into perspective and yielding a rate-of-return figure for comparison with the risks involved.

In developing new products, hot ideas, internal company analysis, and planned new-product programs are all important, but the profit goal must be the primary consideration at each step. We believe this type of analysis to be a key tool in developing profitable new products.

Let's Have Another Cup of Coffee . . .

THE COFFEE BREAK, which may appear to be a trifling item, has become a practice of considerable cost to management, according to a report in the Associated Industries of Cleveland publication, *For the Informed Executive*. A recent survey conducted for the Pan American Coffee Bureau indicates that 27 million workers participated in coffee breaks during 1957—71 per cent of the nation's workers, as compared to 40 per cent in 1950. Of these, 15 million take their breaks in the morning, 4 million go out in the afternoon, and 8 million are doubly blessed with two coffee breaks every day. On a typical day, these workers consume some 47 million cups of coffee.

Assuming that the average coffee break takes 15 minutes, and that two such sessions are held each day, the practice chops two and a half hours from the employee's work week. At the average straight-time hourly rate of \$2.29 in the Cleveland area, for example, this would amount to a weekly cost to management of \$5.72 for each employee. If the coffee breaks are kept to only ten minutes apiece, the cost would be \$3.82 per employee each week.

Getting More Mileage from Engineering

(Continued from page 19)

directly affected, deficiencies in any one or more of these factors are likely to result in reduced engineering productivity. Improvements, therefore, generally have rather marked and immediate effects on both the quantity and quality of the engineering staff's output. Of course, these factors also influence morale to some extent and may, if markedly deficient, have an adverse effect upon motivation.

The company's hiring policies, training opportunities available, personnel administration policies and procedures, and compensation and patent policies have comparatively little effect on the operational environment in which an engineering staff works—that is, they seldom directly affect the ability of the staff to work on meaningful assignments without interruption or distraction. Rather, these factors more often than not affect the long-term relationship between the engineering staff and the company, and the correction of deficiencies in these areas, while no less important, will usually have a less immediate and noticeable effect on the level and quality of engineering output.

Working from this broad framework, we can explore in more detail the role that each of these factors plays in affecting the productivity of engineering manpower.

EFFECTIVE LEADERSHIP

Engineers react to poor leadership just as other people do, and because an engineer's output cannot readily be quantified or measured, good leadership is vital to maximizing productivity.

Getting the engineering staff to do its assigned work efficiently and effectively requires technical competence on the part of the leaders, because an understanding of the field is essential if the leader is to exert the necessary control and guidance. It also requires an ability to inspire and to understand human beings.

To have good leadership at the top levels, constant attention must be given to the development of competent supervisory personnel, where lack of effective leadership is usually more critical. Management is frequently lax in making certain that engineers are

properly led, simply because it really does not know how its engineers *are* being led. Moreover, because good leaders in this field must invariably have some technical background, it is difficult to take effective action except through the existing leadership.

Clearly, one of the first steps must be a thorough analysis and evaluation of the procedural techniques and administrative policies employed in the engineering department. Desirable improvements should only be made through, and after discussion with, the existing leadership. If this group is unwilling or unable to recognize its own shortcomings as leaders, little can be done unless replacements are made.

There are several more or less universally applicable procedural techniques that are being employed successfully by engineering supervisors in many companies. Briefly, these techniques are as follows:

1. Plan all work carefully.
2. Select personnel for assignment to projects on the basis of availability, interest, and if it involves group work, compatibility.
3. Discuss and carefully explain the work and the desired objective to the engineer(s).
4. Allow time for the engineer(s) to study the assignment and requirements.
5. Jointly agree on and fix a completion date after recapitulating objectives.
6. Define clearly the responsibility and scope of authority delegated.
7. Check on progress at regular intervals, and give necessary assistance and support.
8. Evaluate the work upon its completion.
9. Review the evaluation with individual(s) concerned. Praise as well as criticize, and explain how future improvements can be made.

PLANNING THE WORK

Planning is important to the lower and intermediate supervisory levels in an engineering department, but it is even more vital for the chief engineer or engineer executive, who must determine the work objectives of the entire department. Unless the work objectives

are carefully planned in coordination with those of other departments and clearly understood by each member of the engineering staff, it is difficult to insure that engineering time will be spent on meaningful projects that fit into the company's over-all product objectives.

Planning also requires constant communication between top management and the engineering staff, so that management can monitor and evaluate the engineering staff's suggestions and complaints. This close contact permits the continuous evaluation of the various projects that is necessary to prevent them from going down costly blind alleys. Moreover, when management fails to maintain close and effective communication with the engineering department, it is difficult, if not impossible, to effect the constant and vital coordination between engineering and other departments.

Evaluation of the engineering work to be done, and the assignment of some of the elements of a given project to engineers and other elements to less well-trained technicians, is an important part of planning. As much as possible of the engineers' work should be challenging, and the critical decisions in this area must be made by a high-level member of the engineering department staff who is familiar with the nature of the work and with the personalities and capabilities involved.

Scheduling, assigning priorities, and budgeting the time allocated to engineering work is another aspect of planning that many companies neglect. These procedures can often obviate the need for crash programs, or at least greatly reduce their impact on the department.

ENGINEERING DEPARTMENT ORGANIZATION

The organization of the engineering department should depend on the nature of the work. There are decided advantages and disadvantages to both the "project" and the "systems" approaches. Under the project approach, groups of technical personnel are assigned to specific projects until they are completed. Evaluation of the individual engineer's performance is difficult under this set-up, and management should take pains to implement systematic evaluation procedures. Moreover, friction and dissatisfaction may occur when groups are split up and reassigned upon completion of a job.

Management must understand the difficulties involved, yet maintain sufficient pressure to hasten the process of readjustment as much as possible.

Under the systems approach, where each type of work is performed by different personnel, evaluation is much easier, but engineers can quickly become "rutted" or overspecialized in one particular area. Consequently, management should see that they are periodically rotated to new types of work.

Work groups, regardless of the approach employed, should be kept as small as possible, provided the group leaders available are good. Interestingly enough, many companies have found that small groups under poor group leaders are generally less productive than larger groups under good supervisors.

PHYSICAL WORKING CONDITIONS

Engineers, like most people, are hindered by the physical limitations that affect their ability to produce. When such factors as work space and equipment are inadequate, and when noise and distraction levels are high, both their efficiency and their morale suffer. It is surprising how many managements are oblivious to the conditions under which their engineers are forced to work. Even more surprising is the erroneous conception that noise and distractions have little or no effect on engineering productivity.

Naturally, engineers should not be coddled. They need marble palaces, private offices, and tons of specialized equipment much less than they need an opportunity to work without interruption, to have easy access to necessary source and reference material, and to be able to confer with each other and with their supervisors in private.

SUPPORTING PERSONNEL

Technicians and semiskilled supporting personnel should only be employed when the demand for their services justifies hiring them. They can be extremely valuable when their use will free trained engineers from routine and monotonous work. It is sometime difficult to decide which work is meaningful to engineers and which is not, but generally speaking, whenever engineers are performing repetitive mechanical work, the use of technicians should be seriously considered.

When technicians and other supporting personnel are to be used, it is invariably necessary to train the staff to make effective use of them. Extra plant training programs can be very useful in this respect. Management must be careful to maintain the distinction between supporting personnel and the engineers. Professional pride is injured and poor morale usually develops when supporting personnel are treated on the same basis as engineers.

HIRING PRACTICES

A vast number of engineers are unnecessarily hired annually simply because staff supervisors are untrained or inexperienced in evaluating personnel and matching work and manpower requirements. Training engineering staff supervisors in personnel evaluation and better administrative techniques will ameliorate this situation, but management must also have an effective method for determining actual staff manpower requirements.

TRAINING OPPORTUNITIES

The training opportunities afforded engineers can be either informal, on the job and within the plant, or the more formal classroom type, usually conducted off the job. The value of a training program depends primarily on the care and effectiveness with which people are selected for training and the extent to which the program offered is tailored to meet the company's needs. Too many training programs are little more than indoctrination courses, or courses aimed at expanding the educational base in areas completely unrelated to the company's interests.

PERSONNEL ADMINISTRATION

Engineers often resent being placed under the jurisdiction of people who are not technically trained and therefore, in their eyes, neither familiar with their special needs and problems nor qualified to pass judgment on their professional competence. They particularly resent the undifferentiated application of personnel policies that affect nonprofessional (particularly production-line) personnel to themselves. Management should therefore channel personnel administration and promotion through engineering staff supervisors.

Constructive attention can also often be given to providing the engineering staff with some forms of recognition that will enhance their professional status.

COMPENSATION POLICIES

Too often, the personnel department bases salary administration for the engineering staff on longevity or seniority and the degree of administrative responsibility held, rather than on the contribution, be it technical or supervisory, of individual engineers. The top salaries paid to staff members whose contribution is purely technical consequently tend to lag considerably behind the salaries paid to staff members who make a comparable contribution in the area of supervision. Many engineers unsuited for leadership and disinclined to enter management ranks have been forced to do so simply in order to get higher salaries. If such men are prevented from achieving salary rewards in an engineering function, then management can never hope to attract and retain the type of engineering talent that industry is becoming increasingly dependent upon.

PATENT POLICY

Although it is only a minor factor influencing engineering productivity, the company's patent policy can be an added inducement to the engineering staff. Many companies give no recognition whatsoever for the development of patentable ideas, thus losing a valuable opportunity for improving motivation and enhancing the professional prestige of their engineers. One of the most effective means of extending this recognition is to incorporate or associate the name of the developer with newly patented processes or products in press releases, publicity, and promotional literature. No monetary reward of any kind is made, and patent achievements are simply taken into account whenever promotion or salary increases are being considered. But the engineer nevertheless has some immediate recognition for his contribution and his identification with the company and its interests is invariably strengthened.

REALIZING THE FULL POTENTIAL

As the results of the study conducted by the Graduate School of Business Administration at Harvard indicate, there is a great deal

that industry can do to make better use of its engineering manpower. In past years, with a broadly expanding economy and record industrial growth, it is perhaps not surprising that deficiencies in the organization and management of the engineering function were overlooked or ignored. But in good times or bad, no company can afford to operate indefinitely with internal weak spots and inefficiencies. Now, with rising costs, increasingly competitive markets, and a continuing premium on good engineering talent, the introduction of some overdue improvements can go far to insure that management will get the full value from its considerable investment in engineers and technical manpower.

Foreign Trade Passes Its Peak

THE BOOM IN U.S. FOREIGN TRADE, which in the first half of last year carried commercial exports (excluding military aid) to a record annual rate exceeding \$20 billion, has been subsiding, the *First National City Bank Monthly Letter* reports. During the second half of 1957, such exports dropped to an annual rate of slightly over \$18 billion. Last year's commercial exports mark the culmination of an upsurge that began late in 1954. At a total of about \$19.4 for the full year, they were up 12 per cent from the 1956 level and 51 per cent from the level of 1954. The surplus of exports over imports swelled to \$6.5 billion, the largest in ten years.

Several factors contributed to this export bulge. One was the temporary stimulus to demand for petroleum, coal, and other commodities imparted by the closing of the Suez Canal. Another was the strong but short-lived stimulus to agricultural exports provided by a bad harvest in Europe in 1956, coupled with the U.S. drive to dispose of surplus farm commodities at bargain prices. And along with these transient factors was the exuberant growth of the free world economy, manifested in rising productivity, unprecedented investment activity, and the development of mass markets for industrial goods.

By mid-1957, some of these factors were losing their force, and exports began to drop. But more basically, the fall in U.S. exports stems from the lopsided expansion of foreign trade, which revived the old problem of the so-called dollar shortage. According to Department of Commerce estimates, U.S. dollar disbursements abroad, resulting from purchases of goods and services, loans, economic aid, and private investment, reached a record figure of almost \$27.5 billion during 1957—more than 40 per cent over 1954. Huge as the over-all supply of dollars has been, however, it has fallen short of the amounts called for by the record foreign spending for U.S. goods and services, flow of private capital to this country, and building up of private dollar balances.

Controlling the Costs of Research

(Continued from page 24)

The research director and group leader can then determine the total expense for any project for a given period, thus measuring the research effort in terms of cost to the various projects.

What was the cost of the items making up the total expense?

Normally, we can use the same expense elements, codes, and accounts that are assigned to other departments of the company, though some expenses peculiar to research will require special accounts.

Expense elements such as salaries, wages, supplies, depreciation, insurance, taxes, travel, and communications are common to all departments. However, items such as library, professional services, speakers, memberships, subscriptions, consultants, and outside research are often peculiar to research.

The research director and group leader can assign expenses to the proper code and determine the total expense by element for all projects and for each individual project.

Who spent the money?

The answer to this question is an easy one, since the project was assigned to an individual group or area within the department when it was approved. By establishing a code to designate the various laboratory subdivisions to which projects are assigned, the research director and group leader can identify the spender.

How much was spent by type of research?

Projects may call for work in application research, pilot plant research, outside research, synthesis, new methods and techniques, or any of a number of other areas. Records of these expenses are important to the research director and top management to permit control and direction and to determine the total effort or dollars expended in each category.

How much was spent by class of research?

When a project is approved, it must be classified as to whether it is designed to support present investment and sales, to lead to

new products and processes for the future, or to advance our fundamental knowledge. Coded expenses provide data to show management and the research director how effort or dollars are being apportioned between the present and the future.

How much was spent for individual products?

In companies with several product areas, management and the research director may wish to know the expense associated with each product. Each project is classified according to the product area. Expenses of projects applicable to more than one area or those of a general nature that benefit all areas can be charged to a special category and later prorated against established areas.

THE CODING SYSTEM

By considering the questions which management wants answered we have developed a plan for classification and coding of research expenses. A typical project classified under such a coding system might be listed as follows:

<i>Question</i>	<i>Heading</i>	<i>Assigned Number</i>
What was the total spent?	Department	412
What was the cost of the project?	Project Number	2983
What type of expense was it?	Expense Element	218
Who spent the money?	Group or Individual	34
What was the expense by type of research?	Type of Research	12
What was the expense by class of research?	Class of Research	02
What was the expense for a product?	Product Area	07

The code would then appear as: 412 2983 218 34 12 02 07. Several code numbers—group or individual, class of research, and product area—will not change during the life of the project. Those that do must be included by the laboratory employee in his time report.

With this information, the accounting department can prepare reports that furnish short-term records for research management and top management, serve as a basis for budgets, and furnish a long-term record of cost by projects, type and class of research, and product area. These techniques can also be applied to other classi-

fications that may be of importance in research cost control. Of course, any of them may be omitted when they do not apply.

This system is an effective method of handling direct expenses. In addition, overhead expense must also be charged to these projects. One method of accomplishing this is to prorate the overhead expense in relation to direct salaries and wages.

One important point should always be kept in mind: The classification and project coding system should not require laboratory personnel to become accountants to satisfy its requirements. Cost records should be kept in no more detail than is needed for the director's control of research to the satisfaction of management.

DEVELOPING THE BUDGET

Management controls research activities by limiting the budget with appropriated funds. Many companies use a fixed percentage of their sales to determine the research budget, and, when the sales forecast fluctuates downward, the research department is forced to reduce its planned program, usually at the expense of long-range projects. In some cases, this could prove detrimental to the future growth of the company.

A budget based on plant investment is more stable and presently is being used by some companies. This plan must remain flexible, since unusual expenditures and new development projects will require special funds.

Since technical personnel represent the largest single item in the research budget, they can be used as a cost base. A study of the year's program will reflect the proportion to be devoted to maintenance research, new-products research, and fundamental research, while detailed analysis of the individual projects will determine the manpower requirements. Finally, the cost per technical man can be determined from the various expense elements such as salaries, wages, and supplies. Preparation of other budget schedules can then follow rather easily, since the number of technical people assigned to various projects and classification areas is known. This type of computation may not always be completely accurate, since some groups may require fewer supplies or repairs and unpredictable factors can always enter into any of the projects.

Since other departments are normally charged for work of a

service nature, a section must be established in the budget for credits. This can consist of items for each type of service—such as service to the production, sales, and engineering departments—or all may be included in one item.

In effect, then, a gross and a net budget are developed. It is the net budget that determines the scope of the research effort, since it is within its limits that actual research projects are accomplished.

Once expenses are classified, a budget schedule can be developed to match them. Periodic reports from the accounting department will then show actual expense versus budgeted expenses for each item on the schedule. This consolidated report provides the basic information needed for control of the research program.

With these data, management can readily determine whether the research department is following the program as budgeted, and can modify or shift activities as necessary.

CONTROL OF THE RESEARCH FUNCTION

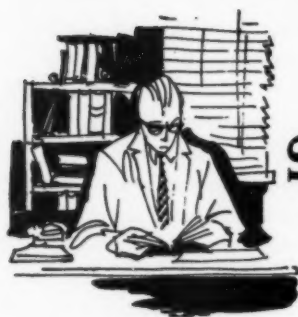
Planning is the key to control. Planning on the company level determines the amount of money that can be allocated to research, and thereby sets the over-all budget. Planning by research management distributes these budget dollars to fit the particular program. And at other supervisory levels, planning is the key to efficient use of this money in pursuing work on specific projects.

Budget schedules are developed to reflect this planning, and cost expense reports are developed to measure performance on an expense basis and to provide means of controlling these expenditures.

With proper budgeting and cost-reporting procedures, management has the tools to analyze, control, and schedule research activities to the best future interests of the company.

AGREEMENT makes us soft and complacent; disagreement often brings out our strength. Our real enemies are the people who make us feel so good that we are slowly, but inexorably, pulled down into the quicksand of smugness and self-satisfaction.

—Sydney J. Harris



SURVEY OF BOOKS FOR EXECUTIVES

IMPROVING MANAGERIAL PERFORMANCE. By Virgil K. Rowland. Harper & Brothers, New York, 1958. 163 pages. \$3.50.

*Reviewed by George S. Odiorne**

There is a hard core of management development specialists in companies all over the United States and Canada who learned their trade from Virgil Rowland, and it was at their suggestion that this book was written. For some six years, Mr. Rowland doubled in brass as an executive in the Detroit Edison Company and a lecturer on management development for the American Management Association. As an AMA Fellow, his chief medium of communication during this period was the lecture platform and discussion room. Now he has produced a tight summary of his philosophy and techniques for establishing and installing a management-development program in a going concern.

* Assistant Director of Personnel, General Mills, Inc.

Mr. Rowland's book is the result of thousands of hours of testing in class and thousands of knotty questions that have been tossed at him from the floor by operating executives. No mere creation out of pipe smoke and vapid theorizing, this book is one in which the questions are answered and the logical flaws have been ironed out.

Management development, Mr. Rowland says, is not an addition to a manager's job; it is his job. His basic assumptions are consistent with the most progressive management theory. He holds that managerial performance will be better if people know what is expected of them and are told systematically how well they are doing. Mr. Rowland calls these things "standards of performance" and "performance appraisal and review," and he presents a simple but carefully thought-out plan for getting them done in a business. His main point seems to be that management development isn't the exclusive business of a specialist; rather, it's a basic responsibility of every line manager.

There's not much dispute over the

need for management development these days, but there's not complete agreement over method. In taking certain positions on how to do it, Mr. Rowland has begun a controversy—or perhaps it would be more accurate to say, picked up one that is already in progress—and demolished a few of his adversaries.

For example, he isn't exactly in harmony with Professor McGregor of MIT, who has expressed some delicate disdain for the group appraisal method. Nor, probably, is he in tune with Robert McMurry, who loves benevolent autocrats, or Professor McNair of Harvard, who gags at many of the modern theories of human relations. He certainly won't elicit any enthusiastic support from William H. Whyte, Jr., of *Fortune*, who sees much of this management-development business as a manipulative means of turning people into conformists.

In this tightly written little book, Virgil Rowland is terribly logical, and for a while he will keep a lot of people very busy indeed. It may be worth noting that many "experts" on management development have achieved their reputations through writing about something they have never done personally. Virgil Rowland has not only practiced what he preaches himself, but he has taught thousands of other people how to go about it and seen them apply it, too. It would thus seem that, all theorizing aside, the weight of practical experience and empirical evidence lies with him. If that's important, then this is one of the most significant books on management development yet written.

SALES COMPENSATION MANUAL: A Guide for the Capital Goods Industries. Machinery and Allied Products Institute and Council for Technological Advancement, Washington, D.C., 1958. 239 pages. \$20.00.

*Reviewed by Dean H. Rosensteel**

For those individuals responsible for the development and administration of salesmen's compensation, the Machinery and Allied Products Institute and the Council for Technological Advancement have jointly prepared a simple, practical presentation of this field of management in their *Sales Compensation Manual*. While, as the preliminary chapter points out, the manual focuses primarily on the problem of compensating salesmen as it exists within the capital goods and allied equipment industries, many of the questions discussed and the principles suggested are, of course, applicable to other industries as well.

The manual presents, in outline form, a guide to the establishment of a sales compensation system. Beginning with a discussion of the characteristics of the capital goods and allied equipment industries, and how the objectives and basic provisions of a sales compensation system are related thereto, it proceeds to offer a detailed presentation.

The diagnosis of the basic provisions of a sales compensation plan affords the reader an understanding of the nature and applicability of the various provisions and the theory be-

* Director, AMA Executive Compensation Service.

hind each. The components discussed are total earnings, base salary (guaranteed minimum), variable (incentive) compensation, adaptability of a sales compensation plan, teamwork or group effort, and areas of managerial direction and control. Each section contains an analysis of the alternatives and their technical aspects, thus enabling the reader to apply them to particular situations.

Following is a brief treatment of the mechanics of formulating and administering a sales compensation plan, furnishing practical information on how to formulate a plan, test it, adopt it, and provide for review and adjustment.

To this reviewer, the manual's

major contribution is to be found in Part II, which contains abstracts of actual sales compensation plans in use today in the capital goods industries. Up to this point, the manual has set forth the objectives of a sales compensation system, and has discussed in some detail the basic provisions essential to an effective sales compensation plan. There remains, however, the task of spelling out these provisions in sufficient detail to provide a guide to the reader in constructing a plan tailored to fit the requirements not only of his particular industry, but of his particular company. This aim is well accomplished by the representative company plans that accompany the text.

Briefer Book Notes

(Please order books directly from publishers)

GENERAL

CORPORATE PUBLIC RELATIONS: *Arm of Modern Management.* By John W. Hill. Harper & Brothers, New York, 1958. 178 pages. \$3.50. Written by one of America's leading public relations consultants, this book aims at examining and describing some of the principles underlying public relations for corporations. Among the topics discussed are the making of values, the political attacks on "bigness," changing public opinion, elements of sound corporate policy, employee communications, industry-education cooperation, stockholder relations, and international public relations.

FEDERAL ACTIVITIES HELPFUL TO COMMUNITIES. By the U.S. Department of Commerce, Office of Area Development. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington 25, D.C., 1958. 34 pages. 20 cents. This booklet is designed to serve as a checklist of federal programs and services that can be of help in community improvement, and other local economic development programs. Among the forms of assistance listed are federal loan and procurement aids for small business and technical aid in community job-development efforts. The special policies providing certain preferences to labor-surplus areas in the placement of defense contracts and facilities are also outlined.

QUEUES, INVENTORIES AND MAINTENANCE: *The Analysis of Operational Systems with Variable Demand and Supply.* By Philip M. Morse. John Wiley & Sons, Inc., New York, 1958. 202 pages. \$6.50. An Operations Research monograph on the application of queuing theory to problems of maintenance and inventory. The author describes a unified method for expressing various problems in terms of difference equations, as well as various procedures for solving them. Numerous tables and graphs are included.

LINEAR PROGRAMMING AND ECONOMIC ANALYSIS. By Robert Dorfman, et al. McGraw-Hill Book Company, Inc., New York, 1958. 525 pages. \$10.00. A comprehensive text on the relation between linear programming and standard economic analysis. Among the topics covered are linear programming as applied to the problems of a firm, the theory of games, the modern input-output theory, general economic equilibrium, and welfare economics. Designed primarily for economists and those interested in managerial economics.

MAKING THE MOST OF YOUR ESTATE: *A Guide for the Salaried Man.* By Earl S. MacNeill. Harper & Brothers, New York, 1957. 182 pages. \$3.50. Using illustrative case histories, the author discusses wills, trust funds, tax advantages, life insurance, and such fringe benefits as pensions, stock options, profit-sharing plans, and group insurance. A summary of income, estate, and gift taxation is appended.

THE AGE OF PSYCHOLOGY. By Ernest Havemann. Simon and Schuster, New York, 1957. 115 pages. \$3.50. An introduction to psychology based on a series of articles in *Life* magazine. Written in a popular style, the book discusses such topics as how we see, hear, and learn, psychology in industry, school, and everyday life, psychoanalysis, and other approaches to mental health.

THE TAO OF SCIENCE: *An Essay on Western Knowledge and Eastern Wisdom.* By R. G. H. Siu. The Technology Press, Massachusetts Institute of Technology, and John Wiley & Sons, Inc., New York, 1957. 180 pages. \$4.25. A look at science and organized research from the viewpoint of Oriental philosophy. Among the subjects treated are the effectiveness and limitations of the scientific method, management and practice of modern research and science, and the assimilation of modern science. This is an interesting study enriched by numerous literary allusions.

OFFICE

IDEAS FOR MANAGEMENT: *Papers and Case Histories Presented at the 10th International Systems Meeting.* Edited by Gibbs Myers. The Systems and Procedures Association of America, 4463 Penobscot Building, Detroit 26, Mich., 1958. 512 pages. \$16.00. The 80 articles that comprise these proceedings offer a compendium of the best management techniques for reducing paperwork costs. The topics discussed include techniques and tools of systems work, integrated and electronic data processing, manual and machine accounting applications, production and material control systems, communications and reports, and work simplification and work measurement. Numerous charts, graphs, and illustrations accompany the text.

GENERAL OFFICE PRACTICE. By Fred C. Archer *et al.* Gregg Publishing Division, McGraw-Hill Book Company, Inc., New York, 1958. 504 pages. \$3.64. Written with three groups in mind—the student, the teacher, and the businessman—this book has been planned to meet the mounting pressure for expanded and improved clerical training. The various phases of modern office operations are described in simple, straightforward terms.

PROCEEDINGS OF THE FOURTH ANNUAL COMPUTER APPLICATIONS SYMPOSIUM. Armour Research Foundation, Illinois Institute of Technology, 10 West 35 Street, Chicago 16, Ill., 1958. 126 pages. \$3.00. Papers covering new uses of digital computers in business, management, engineering and research, and recent developments in automatic programming.

PROCEEDINGS, SECOND ANNUAL CONFERENCE, ADMINISTRATIVE APPLICATIONS DIVISION. American Society for Quality Control, Inc., Room 6197, Plankinton Building, 161 West Wisconsin Avenue, Milwaukee, Wisc., 1958. 102 pages. \$3.50. Among these proceedings are papers on statistics in engineering, decisions under uncertainty, unrepresentative samples, and the economic considerations of inefficient statistics.

AMA CONFERENCE CALENDAR

SEPTEMBER - OCTOBER, 1958

<u>DATE</u>	<u>CONFERENCE</u>	<u>LOCATION</u>
September 22-24	FALL PERSONNEL CONFERENCE	Statler Hotel, New York
October 6-7	SPECIAL MARKETING CONFERENCE on the District Sales Manager	Statler Hotel, Los Angeles
October 8-10	RESEARCH AND DEVELOPMENT CONFERENCE on Planning Products that Sell	Biltmore Hotel, New York
October 15-17	SPECIAL FINANCE CONFERENCE: Timing the Upturn—Evaluating and Using Business Indicators	Roosevelt Hotel, New York
October 22-24	OFFICE MANAGEMENT CONFERENCE	Statler Hotel, New York
October 27-29	MANUFACTURING CONFERENCE: Cost Management and Profit Improvement	LaSalle Hotel, Chicago

To register or to obtain additional information on any of the conferences listed above, please contact Department MB American Management Association, 1515 Broadway, New York 36, N. Y.

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